THE
NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES. **Boston, February, 1871.** VOL. V.---NO. 2.

R. P. EATON & CO., PUBLISHERS, OFFICE, 34 MERCHANTS' ROW. **MONTHLY.** SIMON BROWN, S. FLETCHER, } EDITORS.

FEBRUARY THOUGHTS.

ALTHOUGH the shortest month in the year, FEBRUARY is sometimes the coldest. Last year a storm commenced on the 8th day by scattering snow flakes falling in the morning. The wind rose as the fall of snow increased, and in the evening the air was filled with it so thickly that only for a short distance could large objects be seen. Then came the northern blast, roaring through the trees, whirling the dry flakes into the air and seeming delighted in scattering them in every direction, or piling them in masses under the stone wails, or filling the highway so that man nor beast could pass over it. It was "fun" to see it, backed by a warm room, bright lights and an easy chair. The scene without recalled some experiences when "snowed in" in the mountains, and gave the comforts of social life new charms. No position seems so thoroughly to bewilder the senses and make all vague and uncertain about one, as to be overtaken at night in an unknown region, and amid a trackless waste of snow. If the heavens have obscured their lights, every step the traveller takes must be one of doubt and misgiving; may lead to difficulties that cannot be overcome.

How vividly comes every thought of the poet to one who has sunk exhausted on the mountain side, and planned his hut of green branches in the valley below, if a little rest and reviving powers would enable him to get to them.

> "Lone on the midnight steep, and all aghast,
> The dark, wayfaring stranger breathless toils,
> And, often falling, climbs against the blast."

We can have little good farming without good stock. No stock, no manure; no manure, no crops; no crops, no anything. We are used up. So, the more cold the weather, the more attention the stock will require. The backbone of the winter is broken, so far as days and weeks are concerned. But not so of the weather. Old Boreas will not resign the reins till after the first of March, but blows, and freezes, and showers his snow flakes upon us more freely than ever. We must not anticipate the green grass too soon, but husband the resources of the barn as though we knew that February, March, and even the fickle April, would require as much fodder as January itself.

Keep all the stock so that they shall have soft, loose skins, and lively hair. If they present these appearances, they will be perma-

nent advertisements of their owner's skill and humanity. They will fill large milk-pails, become the envy of every good teamster as workers, or surprise you at the shambles by a weight which you scarcely expected *in an animal that did not look very fat!* The rough tallow was well laid on, another month's feeding would have shown the fat nearer the surface.

But, Mr. Farmer, your duties are not all among the animals who do not think and reason. You have others, perhaps, whose thoughts are to be guided and reasoning powers aided, or corrected. So when the boys have returned from school and assisted in making all comfortable for the night about the barn,—and the girls, with charming zeal and aptitude, have lightened the mother's cares, *you*, yes, *yourself* must become a teacher in the higher school. The room is warm; the lights clear; the wind roars through leafless trees without; books are upon the table, and their lessons for the succeeding day are scanned.

Now is the time for the *natural* teacher to go as far as he can over the lessons which the children are striving to master. Nothing will encourage young students so much, and the effort may become as instructive to parent as to child. They become teachers in turn.

It should be remembered, too, that education not only secures the means of being useful to the world, but, rightly used, confers ease of manner, dignity and grace upon its possessor, and what is of still greater importance, *saves the child from a life of idleness and vice.* Returns from the penal institutions of New England show the two leading causes of crime to be the want of a trade, and the want of education.

The *February* evenings, then, are moments precious beyond measure, in this light. If judiciously occupied for a single month, knowledge may be gained and impressions made which may be a source of power and happiness through a long life. The scenes of such evenings may become a "joy forever,"—a stay and comfort in the trials of life, and a foretaste of heaven itself.

Who will allow such opportunities to pass unimproved? Who so indifferent as not to recognize and value them? Let it not be those standing pre-eminently amidst the most pleasing operations of a Divine Hand, and witnessing its manifestations in everything he sees or touches in the duties of his daily life. Improving the soil tends to improve the mind. Improving the mind gives us power to improve the soil. When both are accomplished, the labor of the farm will be more agreeable, and its profits larger.

APPROPRIATE WORK FOR FEBRUARY.

TOP-DRESSING.—If snow is not too deep, this month is a good time to top-dress lawns or mowing lands. The weather will be sufficiently cold to prevent fermentation, and if the dressing freezes or is covered with snow, there will be little or no loss by evaporation. The melting snow or rain will wash out the enriching matters, and carry them down among the roots of the grasses, where they will be ready for use by the plants when the earth is warmed by the spring sun. This work can be done without injuring the surface by wheels or feet of the team, and will be out of the way when other duties are urgent. In the spring pass over the manure with Witt's Breaker, and it will become so fine as to be washed down by the first rain.

HAUL OUT MANURE.—Dr. DANA, who had occasion to weigh the droppings of cattle many times, states that one cord of green dung, pure as dropped, weighs *nine thousand two hundred and eighty-nine pounds!* If the farmer, then, wishes to apply six cords to an acre of his corn land, his team must haul thirty-one tons and seven hundred and thirty-four pounds, in order to place it on the field. In many cases it would be necessary to haul this up hill, and quite often over ploughed ground. If several acres were to be planted, and each supplied with a similar amount, the task to remove it would require several days, and would be a Herculean one. Of course, as the manure was fermented and dried, the weight would be less.

The labor of removing this immense weight is not the only objection against leaving it until the ground is bare, and planting time at hand. Other duties are pressing then, which cannot be postponed. If hauled to the field where it is to be used, and thrown into a compact form, it will be ready for overhauling and breaking up as soon as the frost leaves it. This should be done two or three times, and a

slight fermentation allowed to take place, in order to facilitate breaking it up.

Some persons object to hauling out manure in the winter, because it must be unloaded by hand from a sled. This, however, is one of the operations which the manure needs. It is so much done towards making it fine. If the heap is slightly covered with loam, after being overhauled in the spring, little or no loss will occur from evaporation. If the ground remains bare, the teaming can be done on the frozen ground easier than on the soft ground in the spring.

The wood pile, fencing stuff, hog stye, house cellar, farm implements, poultry house and many other things, require attention in this month.

St. Valentine's day will come on the 14th, when, it was anciently supposed, birds began to mate. If the day suggests to any party, any exercises of that nature, it should be remembered that large latitude is allowable on the old Saint's day.

The suggestion of old Tusser, who worked on his farm, and wrote about it, near 300 years ago, is a good one with which to close this homily:—

"Good provender laboring horses would have,
Good hay and good plenty plough oxen do crave,
To haul out thy muck, and to plough up thy ground,
Or else it may hinder thee many a pound."

For the New England Farmer.

THE GARDEN IN FEBRUARY.

Though, in our New England climate, little other work can be done in the garden than to see that no injury results from negligence, there are a few things the prudent, thoughtful gardener will do to anticipate Spring work. But this is the season for planning, study and investigation,—a part of garden work too much neglected. Time that should be devoted to reading and planning for the future may be spent listlessly or worse. Times and habits change. A few years ago an "English Strawberry" was a novelty in many a New England village and on most farms. Many vegetables and flowers have been introduced during the past ten years, and a knowledge of their names and uses is becoming a necessary part of the education of a farmer's family. Our tables are not well provided with vegetables, and we have consequently fallen into the habit of eating too much meat. It would be more healthy, and less expensive to increase the vegetable portion of our diet. Meat is costly, and there appears to be a constantly increasing advance in cost of some kinds. The best antidote for this state of things is for every farmer, especially, to grow a greater variety and quantity of vegetables; and to do this the most profitably, advantage should be taken of the experiences of others as recorded in horticultural books, and our farm papers.

Cold Frames need good care to prevent the plants from damping off or other injury. Plenty of air must be given on mild days, and protection from sudden changes of temperature at all times; the great end is to keep them in a dormant state, free from injury.

Cuttings and Scions.—Cuttings from currants and gooseberries may be made, during a mild spell; also scions for grafting may be cut and preserved for spring use.

Grape Vines.—Neglected vines should be pruned during this month, at the latest, before they come into full leaf. A. S. Fuller says he prunes in December.

Horseradish.—A thaw may afford an opportunity to dig for family use or for market. It may be kept fresh a long time packed in moist sand, or earth; grated and moistened with water, with a little salt added, and bottled, it makes a very acceptable condiment with boiled sauce. Vinegar destroys its life, if kept in it.

Seeds.—Overhaul all home grown and see that their vitality is preserved. The vitality of seeds depends greatly upon the care they receive in growing and preserving. Some are sure to vegetate only one year, while others will retain germinative qualities ten or more years. Send your orders to reliable Seedsmen for any deficiency. The general gardener can ill afford to test many novelties. There are enough well established varieties of all kinds of vegetables, &c., from which to select. Let amateurs experiment in new kinds, and if they prove desirable, a few seasons hence will become plenty and cheap.

For the guidance of the inexperienced, I will here name a few of the different varieties of vegetables, &c., desirable in every good garden.

Asparagus.—A bed of greater or less size, according to size of family, of this very desirable plant should be found in every garden. Connover's Colossal is the most desirable, yet the older varieties should not be rejected. Good culture and high manuring will insure a corresponding good size and crop.

Beans.—Of these we want Bush, Dwarf, and Pole, or Running. Early Valentine, China, and Dwarf Wax are desirable sorts for snaps or string. Lima, Case Knife, Red and White Cranberry and Giant Wax or London Horticultural, for poles.

Beets.—Early Bassano, earliest; Long Blood Turnip, late; Swiss Chord, fine for greens only.

Cabbage.—Jersey Wakefield; Early and Large York; Early Ox Heart; Winningstadt; Early Flat Dutch; these for early and medium are the most desirable. Marblehead Mammoth; Stone Mason; Common Ball;

Flat Dutch; Green Globe Savoy, for late. Red Dutch for pickling.

CARROTS.—Early Horn, for early; for main crop Long Orange.

CAULIFLOWER.—Early Erfurt, dwarf compact; Early Paris, fine, but larger than last; Wellington, largest.

CELERY.—Incomparable Dwarf; Seymour's Superb, largest growing, suitable for hot, dry climate.

CORN.—Mexican Sweet, sweetest and tenderest Early; Trimble's Improved Sweet; Crosby's Early; Stowell's Evergreen; these are the very best varieties of sweet corn with which I am acquainted.

CUCUMBERS.—Early Cluster; White Spined: Early Frame and Long Green Turkey.

EGG PLANT.—Early Long Purple, earliest; Long Purple; N. Y. Improved, and Striped Gaudaloupe.

ENDIVE.—Green Curled; Moss Curled; use, Summer and Fall salads.

KALE.—Dwarf German and Green Curled Scotch; winter and spring greens.

LETTUCE.—Early Curled Simpson; Green Winter; Black Seeded Butter, and Ice Drumhead.

MUSKMELON.—Green Citron; Nutmeg; Borneo; White Japan, and Skillman's Netted.

WATERMELON.—Mountain Sprout; Black Spanish and Ice Cream. Green Citron for Sweetmeats.

ONIONS.—Wethersfield Red; Danvers Yellow; White Portugal and Potato.

PARSNIPS.—Hollow Crowned; Round Early or Turnip, for shallow soil.

PEAS.—Early Kent; Carter's First Crop; Dan O'Rourke; McLean's Advancer; Champion of England and Black Eyed Marrowfat.

PEPPERS.—Squash, for pickling; Sweet Mountain for stuffing; Cayenne.

POTATOES.—Irish.—Early Rose; Early Mohawk; Early Goodrich and Orono.

SWEET POTATOES.—Yellow Nansemond.

RADISHES.—Long Scarlet Short Top, and Scarlet Turnip.

SALSIFY.—Vegetable Oyster.

SPINACH.—Round leaved for early; Prickly for wintering.

SQUASH.—Yellow and White Bush Scalloped; Summer Crook-neck and Boston Marrow for summer. Hubbard; Yokohama and Winter Crook-neck for winter.

TOMATOES.—Trophy, largest and most solid; Gen. Grant, Lester's Perfected and Tilden.

TURNIPS.—Early Flat Dutch; Red Top Strap-leaf, and Ruta Baga.

Aside from these we want Sweet Fennel, Dill, Coriander, Caraway, Hoarhound, Sage, Summer Savory, Thyme, Sweet Marjoram, Rosemary and Saffron. W. H. WHITE.

South Windsor, Conn., 1871.

For the New England Farmer.

WHY DON'T THE BUTTER COME?

I see by the FARMER of to-day, that Mr. S. of East Burke, Vt., asks that *same old question* that has been asked and answered a thousand times already, "Why don't the butter come?"

I do not expect to answer it so that it will stay answered; but will only give a few facts from my own experience of ten years at butter making.

I used to think I could take cream from any dairy and make butter from it in an hour by putting it at the right temperature.

I preached that way till I had an opportunity offered me to try it. One of my neighbors tried to churn. The cream had not been kept under the best conditions for two weeks. Some of it had been frozen, and some of it scalded. Nor had the cow been grained very highly or salted regularly. The cream was brought to the kitchen and poured into the churn, then placed near the stove to warm.

After warming awhile, the lady of the house commenced operations. She churned an hour, then let her girl churn two hours, then she tried it again, and they took turns and kept the crank revolving all day. In the evening the man churned till bed time. The next day it was started again, and it was kept churning more or less every day for *two* weeks.

It was pronounced too cold, too warm, and too everything. It was warmed, and cooled, and salted and treated to a dose of saleratus. Hot water was poured in, and so was cold water; but, most of all, it was *churned!* The mother churned it, the father churned it, and the young folks all took turns at it. It was knitting work for the whole family.

As a last resort, they sent to borrow my churn, and I was foolish enough to offer to take their cream and churn it for them. I brought it home, obtained the right temperature by the thermometer, then *churned* that cream,—only stopping for meals and lodging—*two whole* days.

By this time the cream was completely *worn out*, and I was thoroughly cured of *preaching* on the subject of churning.

But about the *facts* in my own weekly practice. I feel just as sure of butter within forty minutes as I do that a kettle of potatoes will be boiled within that time, when placed over a good fire. I can make the butter for a week with very much less care and anxiety in mid winter than in mid summer, because it is easier to make winter weather warm, than to make summer weather cool.

I sometimes salt my cows, and the butter comes well; again I do not give salt for weeks, and the butter comes just as well. I do not often let my cream freeze, but if it does, the butter comes just as well for all I could ever see. I never do put salt in my cream while it is being gathered, nor do I object to it.

I have never used sugar or saltpetre, neither

do I say I never will. I once thought I never would color butter. I now think differently. I once thought there was an exact temperature at which all cream should be churned. I now vary nearly 10° between summer and winter. In summer I churn at a temperature from 58° to 62°, in winter from 64° to 68°. I want the butter to come so it can be worked,—not too soft nor too hard. I find winter butter harder than summer butter at the *same* temperature.

My cows are at all times kept in good condition, so I do not know whether I could churn cream from half starved cows or not.

If I were going to preach again about churning, I should say that it is very important to have *all* the cream of a churning *alike*, as to *temperature*, and *sourness*, at the time of *commencing* to churn.

I am very particular to stop gathering cream at least twenty-four hours before churning; and I *never* fail in fall, winter or spring to warm all my cream over a stove; stirring constantly all the time, at least twelve hours before churning. Then I wait for it to get sour alike all through. Then bring it again up to the right temperature and churn it. I intend to warm it the first time up to about 70°. I never scald milk or cream, but keep both as near the proper temperature as possible all the time.

Now, if Mr. S. gets any new ideas about churning, from having asked the question, and either *succeeds* or *fails*, I wish he would report, in the FARMER; for it is only after making many experiments, and under many differing circumstances that we can be sure of having gained a correct position.

A. W. CHEEVER.

Sheldonville, Mass., Jan. 7, 1871.

For the New England Farmer.

KANSAS.

MR. EDITOR:—I have read Mr. E. M. Cleveland's article on "Kansas," and your remarks appended to the same, with much interest. I am somewhat conversant with that "Kansas region." I endorse all that Mr. Cleveland says as to its beautiful scenery. The landscapes are boldly beautiful, and sometimes rugged and picturesque. There is much level and gently undulating surface; yet there is continual relief from that level tameness found in many prairie countries.

There are many features of natural beauty never met with in Kansas. There are no mountain torrents or snow-capped peaks so frequent further West; no parks, canyons or gorges, shut in by deep gorgeous forests; no rugged sea coast, with driving billows and ascending spray, singing the terribly thrilling music of nature, and forming fine haloes and rainbows in the atmosphere.

The first time I stood on Blue Mount, at Manhattan, near the mouth of the Big Blue, I was much impressed with the natural beauty of the scenery, and the sweetness and purity of the air. It was a bright September afternoon. Nothing obstructed the sight in any direction. The views up and down the Kansas river, and up the Blue, were indeed very fine. The swollen waters quite filled the river beds, and the shrub-like timber fringed their margins in groves and thickets, as far as the eye could reach.

Beyond and between the river valleys the rugged tumbling prairies, elevated some two hundred feet above the streams, almost confused the senses by their picturesque undulations, abrupt upheavals, tower-like mounds and deep ravines. At first it appeared as if nature, gone mad, had thrown the hills and valleys to the four winds, because she "would none of them;" yet on inspection there appeared to be much "method in her madness." The ridges were more or less connected, and could be approached, in some way, one from the other, and they doubtless were all more or less related to some great back-bone or dividing ridge of table land. The valleys and ravines all tended toward common outlets, emptying at last into the rivers. The soil of these prairies along the Kaw river, contains no gravel; but limestone crops out in quarries everywhere along the hill sides. These quarries show their grey outlines through the green grass for miles, and form no inconsiderable feature in the landscape.

These lands have good soil, produce fine grasses, and for sheep pasture or hill side vineyards, appear very appropriate. But for ploughing purposes, as we understand the matter in Illinois, nothing could be more absurd.

I have now spoken of the roughest portion of Kansas I have met with. Passing westward along the Kaw river, to the mouth of the Republican, and thence up the Smoky-hill branch, past the mouth of the Solomon to Salina, near the Saline river, every grade of prairie is met with, from the most hilly to the deadest level. At Junction City, near the Republican river, is found the celebrated magnesian limestone, extensively used for all fencing and building purposes. It is destitute of grit, and is readily sawed into shape by several steam saw mills located in this vicinity. At Solomon City a considerable quantity of salt is made from water pumped from wells. South of Salina, on Gypsum creek, are extensive beds of gypsum, ready to be utilized when the needs of the people demand it.

The soil is, everywhere, all that heart can wish, and when there is sufficient rain it is wonderfully productive. There is a strong tendency in the climate toward aridity. The word *drought*, in Kansas, means a great deal, and is much feared even by the most courageous. The most of the rains, however, have a wise habit of falling in April, May and June, thus giving crops a good start. Grass and the small grains from this cause generally do well;

but the corn crop must run the gauntlet of July and August, which is extremely hazardous, unless the season be unusual, or the preparation and cultivation of the soil exceptionably good. This aridity of climate is favorable to health. There are no swamps or stagnant pools. The level lands about the streams are underlaid with sand, so that the water in the flats and bayous, disappears as soon as the supply from the clouds or upper streams is discontinued.

For most tree fruits, and for grapes, the soil and climate of Kansas appears well adapted. For the small fruits, special nooks and protected valleys must be selected about springs and the margins of streams.

Kansas is a first-class stock-raising State, yet on that subject I think your correspondent is a little wild. How he can get *one hundred per cent. per annum profit* from a herd of stock, I cannot imagine. Is the young animal at one year old, worth as much as the parent? And does he count the year's attendance, salt, taxes, loss by death, straying, &c., as absolutely nothing? I cannot understand his figures! It is easy, in new countries like Kansas, to talk flippantly of stock keeping in good condition the year round on the wild range. Slip-shod pioneers often allow their cattle to browse for a living through the winter; and by seeking the brush and herbage in protected ravines they generally get through; sometimes in tolerable condition, but more generally with lank bodies and decimated numbers. This state of things, too, is but temporary. It passes away entirely as the country is settled and the range exhausted.

No man desiring to *make money by stock-raising* in Kansas will trust his herds to the wild range in winter. At present he can put up plenty of good prairie hay, which costs but the cutting and stacking. This answers a good purpose. Yet cattle do not get remarkably fat upon it. As this resource fades away, under the pressure of an incoming population, tame pastures and meadow hay must take its place. And the change will be a happy one.

Kansas is a noble State. She is being rapidly settled and her resources developed by an energetic industrious people. All must feel pleased at this, and many thousands will better their condition and prospects by joining their destinies to that of this young rising star. Yet I must say that new countries are seldom permanently benefited by exorbitant praises and over drawn statements of natural advantages. I feel much interested in the prosperity of our young Western States, and should any one desire further knowledge of the country along the Kansas river, as far West as Junction City or Salina, they may address me, and I will reply through the FARMER, if agreeable to the publishers. JOHN DAVIS.

Box 50, Decatur, Ill., Jan. 8, 1871.

UNCOLORED CHEESE.—The demand for white or uncolored cheese is said to be steadily increasing. It is stated upon reliable authority that the use of annotto for coloring cheese and butter has been discarded in some of the New York cheese factories. A number of the Herkimer "fancy factories" (so Mr. Willard reports) made uncolored cheese all through the past season, and the sales of such cheese were at the highest rates received at the Little Falls market. From the fact that much of the annotto used for coloring butter and cheese is adulterated with poisons, its use should be discountenanced. It adds nothing to the palatable qualities of cheese, and if it were not for the requirements of the English market for high-colored cheese, it is probable that there would be little difficulty in excluding annotto from the manufacture of cheese. For American use, it might be dispensed with at once.

BUTTER MAKING.

The New York *Tribune* gives the following as the points of Mr. O. S. Bliss' address at the late Dairyman's Convention at Utica, N. Y:—

It is not true that the management of a good butter dairy has been reduced to a science. We cannot too earnestly urge the necessity of cooling the milk as soon as it is drawn from the cow to about 58 degrees, after which an increase of several degrees may be permitted, with advantage to both quantity and quality of the butter. To this end I advise tanks, holding say 30 gallons of water, in which the newly filled pans may be placed. A supply of running water would be most convenient for this purpose, but it is not indispensable. As a general rule the amount of water required for cooling a mess of milk in a properly constructed tank may be very readily supplied from a well without any very great expenditure of force. I would not recommend the use of ice in butter making, except in extreme cases, and only in water for cooling milk or cream. With good cows, good feed, and proper accommodations for setting the milk, there is little difficulty in making good butter, but it must be confessed, after all, that it is, in a sense, an occult science—there is a sort of slight about it which, if it does not come by nature, must be acquired by experience. We may lay down positive rules for every operation, but the circumstances in which different dairies are situated are so various that these rules, founded upon the highest success in one instance, might not prove just the thing in the other. In conclusion, I advise that skimmed milk be put into the swill-barrel, and not be made into cheese. When fed to pigs supplied with waste material from which to make the coarser and absorbent portion of the manure, it will pay better than in any other way. One year with another it is a question if the pigs themselves will not pay quite as well as the skimmed cheese, and the manure remain as net profit.

TREES,

Ornamental and Fruit—Their Cultivation—How they Grow—Their Diseases, Enemies, and Uses.

IN ORDER to reply to numerous questions in relation to the setting and culture of ornamental and fruit trees, we propose to give between this and the planting season, several articles upon the subject, and advert occasionally to some of the wonderful operations in vegetable physiology.

The study of this branch of science, like that of chemistry, presents a field for investigation in which the proudest intellect may find ample scope. If we take the simplest plant and examine it with reference to its anatomical structure, aided by some of the instruments of enlightened skill, we shall find that in all its parts, nature has evinced the same wisdom, as regards the primary principles of vegetation, adaptation and combination, which characterize her labors in higher works of her production. The incomprehensible variety of *forms*, in which first principles are made to develope in the manifestation of perfect *wholes*—ranging through the entire series of qualities, hues, odors and flavors, cannot fail of being a source of the most pure delight to the enlightened mind.

What, for instance, can be more dissimilar, so far as structure and apparent character are involved, than the tough, elastic, and well-known substance called India-rubber, and the granular, sapid and nutritious product of the sugar cane? Yet in the laboratory of the analytical chemist, these apparent boundaries are said to vanish almost instantly; while the article of linen,—the materials of which have been grown upon a foreign soil, and carried through the processes of rotting, bleaching, &c,—is resolvable into a substance identical with both. By the side of the lordly pine, fit for

"The mast of some great admiral,"

grows the deadly hen-bane, or the fatal night-shade. Yet these plants, so different in outward aspect, and internal qualities, have all been nourished by similar alimentary particles, and perfected from the same soil!

The *humus*, or decayed vegetable or animal matter which we apply to apple or pear trees, is first dissolved, then it is absorbed by the rootlets or spongioles of the tree. This fluid thus taken in by these roots, is elaborated not simply into one product, but many. We trace it in its progress, and find that it produces under one modification, *wood;* under another, *leaves* or *bark;* under another, *flowers*, *fruit*, and the *seeds* of fruit. If an apple graft be inserted, that fluid is capable, under the influence of the principles of life, of producing the fruit natural to that graft, or of being elaborated into the fruit of the tree through which it ascends. If a scion of the Siberian crab be inserted on a stock of another variety, the fruit of each will retain its own distinctive family combination and characteristics unimpaired. The wonderful power in nature, by which this singular immutability is preserved, is concealed from the eye of the physiologist. It is a power lodged amid the arcana of her most retiring rudiments, and which we are permitted to contemplate only in its results.

"Far from all vision this profoundly lurks,
Through the whole system's utmost depth diffused."

There are several kinds of twining plants which ascend their supporters only from left to right. The hop is never known to ascend from right to left; if inverted, and forced to assume a direction contrary to that ordained by nature, it will sicken, lose its native hardihood and vigor, and, most likely, die.

The roots of all plants are commonly regarded as the sole media through which they derive their food. We consequently attach to these organs the highest degree of importance as forming the link of communication between the *earthly* and *airy* portions of the vegetable kingdom. But important as are the offices of the roots, they are scarcely more so than those of the leaves. The human lungs expose the blood to the air, and thus prepare it for nourishing the system through which it circulates; and in like manner the sap—which may be regarded as the blood of plants—is exposed and "aired," or aerified by the leaves of vegetables, which are their lungs.

So far as the economy of nutrition is concerned, the leaves of the oak, the ash and the elm, aspire and spread themselves abroad for the very same purpose that the minute spongioles permeate and diffuse their innumerable roots through the recesses of the soil; both are in quest of food, and the only difference be-

tween them is, that while the latter appropriate only liquid matters, or those alimentary particles which have been previously prepared for absorption and assimilation by solution, the former take in only gaseous or aeriform principles. This position has been repeatedly demonstrated by experiments, and few who have contemplated the evolutions of nature, will doubt its correctness.

If we bury the limbs of some plants, and elevate their roots into the free air, we shall find that the developement, as well as the position of the structure, will be reversed; the part having on it the roots will put forth buds and leaves, and the inhumed branches assume the character and perform the office of roots. The willow affords the most complete illustration of this principle of adaptation in plants. A twig or sucker of this wood, inserted in a moist soil, with its natural position reversed, will grow almost as vigorously as a seedling, and in a short time become a thriving tree.

During the night, plants are believed, by most, to evolve carbonic acid; but this process is by no means so rapid, or so extensive in its products as to destroy the balance in favor of the plants, so far as regards the quantity absorbed by them during the day. The quantity of this gas taken in by the foliage is graduated in a great degree by the season, climate, soil and specific character or nature of the plant. On a general estimate it is perhaps safe to assume that of the entire amount of carbon contained in the crops of our fields,—if the soil thereof is of medium fertility,—from one-third to three-fourths is derived directly from the air.

The functions performed by the leaves of plants, are singularly varied and beautiful:—

"In human works, though labored on with pain,
A thousand movements scarce one purpose gain,
In GOD'S, one, single, can its ends produce,
Yet seems to second, too, some other use."

When we look upon mighty forests, spreading as far the eye can reach, "piercing the summer heavens with their unnumbered cones,—when we survey the bosom of the earth clothed in all the wild luxuriance of variegated verdure, and yielding its diversified and inexhaustible wealth for the support and happiness of man,—we seldom reflect that the elastic fluid which the hand of Omnipotence has drawn around our planet is the source from which this vast assemblage of beauty and utility is derived." We are too apt to attribute the production of all this to the earth, and to regard the atmosphere—like the old philosophers—as an empty void, incapable of furnishing anything of importance or usefulness to plants, and nothing but air to man!

There is not a leaf, however minute, that "spreads its glossy surface to the summer's sun, which does not drink from this wide source of life the aliment which sustains its being; all are alike indebted to it, and all alike would perish were they to be deprived of it." The elements of the common atmosphere, therefore, being of so much importance, it is of the utmost consequence that we endeavor, as far as possible, to avail ourselves of its assistance, which we are enabled to do in several ways.

GROWING VIOLETS.

The Violet has ever been one of my favorite window flowers. In former years when brought into the house from the cold pits to flower, they were placed at once in the sitting-room window, where we had a regular temperature of about sixty degrees; but the stalks were always slender, and the flowers rather small. Thinking it was too hot, I kept them other years in a cooler room, where the heat might perhaps not range over between 45 and 55, and the result has been much healthier looking plants and finer foliage. Besides this, they were not much behind what I have had in warmer places in other years. I am sure they want very little heat to do well.

Another fact. I have learned that a manure water made of rotten wood is a capital fertilizer for them. Once I thought, as shady places were the natural places where Violets grow, rotten wood would be a good thing in the soil, but they sometimes get sick in it; but the liquid of steeped wood does not seem to have this effect; on the other hand, a lively green is the result. We never water them except when they show signs of drying; in our room, this is about twice a week.—*Gardener's Monthly.*

HOW TO COOK EGG PLANT.—Pare and cut the plant in thin slices; let it stand for two or three hours in cold water, well salted, which removes a strong flavor and makes it more delicate; when thoroughly drained, dip each slice into egg and cream, well beaten, (two eggs and two tablespoonfuls of cream), then into cracker crumbs. Have ready a large frying kettle of boiling lard, frying a few slices at a time; they need room, if you would have them delicate and crisp. Stewed tomato is very nice with egg plant.

EXTRACTS AND REPLIES.

LICE ON CATTLE.

Will you or some of your correspondents inform us here what is the best remedy for *lice* on cattle? My whole stock are covered with these pests, and they seem to laugh and grow fat and increase in numbers by every exertion on our part to remove them. If any of your readers can give us a method by which we can get rid of them, they will be conferring a great favor on A CONSTANT READER.

Alfred, Me., Dec. 22, 1870.

REMARKS.—Healthy cattle are seldom lousy in the summer season. Why should they be lousy in the winter? Where did the pests come from that now cover your stock and "laugh you to scorn?" Are your cattle poor? Is your barn infested? Sulphur fed with salt; applications of carbolic acid and oil; a thorough saturation of the whole body with a pint of strong soft soap in a pail of warm water, to be repeated in half an hour, and in half an hour more wash out all the soap and dead lice, and cover the animal with a dry blanket; brick dust, obtained by rubbing two soft bricks together, sifted over and well rubbed into the hair; a wash of one pound of sal-soda to two quarts of water; have the cattle fat when they come to the barn in the fall, and, during the winter, keep the tallow gradually increasing about the kidneys; applying on a warm day to a space six inches wide on either side of the back bone from head to tail, a mixture of a little sulphur mixed with melted lard,—these are among the prescriptions recommended in the Monthly FARMER for 1870. If you have lice in Maine that will laugh and grow fat on all these infallible cures, then we must join in your appeal to our readers for something that will turn their joy to grief.

WHY THE YOUNG MEN LEAVE THE FARM.

I have been very much interested in perusing articles bearing upon this subject in the FARMER and other papers, and now, with your permission, I will state a few of my ideas concerning the same, because I am one of "the boys," and think I know the reason why so many of them become discouraged with farm life.

I think one reason is to be found in the unattractive appearance of the place, together with shiftless management. As a natural consequence, labor on *such* a place being unprofitable, the boys seek some other employment. Again, they are obliged to work harder and longer on such a farm, because of the rocks, brush, rubbish, tumble-down buildings and "scraggy" walls.

Then, the neglect on the part of the parents to make work interesting. The boys notice these things; they also notice that the workmen in the cities and towns command good wages. Hence they flee to the cities and towns as soon as possible, in the hope of bettering their condition; for, you know, they are ambitious,—they think of the future. Now, I ask, do you blame them? *I* don't. But at the same time I don't like the idea of their leaving the farm, and for this reason I write this article. I want to have the parents of these wayward boys think of these things. I want to have them take the matter in hand, and cause the boys to love home, to love the farm. Teach them in the art of farming; provide them with instructive reading matter and with amusements; take an interest in their future welfare; do it all in a kind manner and the boys will remain.

I will close with the following, which I take from "Recollections of a Busy Life," by Horace Greeley, which contains the gist of the whole matter. "Our farmer's sons escape from their father's calling whenever they can, because it is made a mindless, monotonous drudgery, instead of an ennobling, liberalizing, intellectual pursuit."

Westboro', Mass., Dec. 21, 1870. YOUNG MAN.

REMARKS.—We have done with worrying about the boys leaving the farm. We believe that the whole matter will regulate itself in due time. For the last twenty-five or more years manufacturing and trading have been very prosperous throughout the land, and these pursuits have been unusually lucrative. Farmer's boys have crowded into them until there is scarcely standing room for anybody. Cities and villages have outgrown the country. But "it is a long lane that has no turning." We believe we are now on the corner of one of those turns.

A few years ago a trader would fill a store with goods, put up a sign, perhaps advertise, and then sell his goods "over the counter." Customers *came* to his store or shop, then. Now the city merchant must add to all these expenses the cost of "runners" enough to cover the whole country. Last fall when we were down some one hundred and fifty feet under ground, in one of the marble mines of Vermont, the superintendent of the works was looking over specimens of files which filled the travelling bag of a runner who had found his way thither from some manufactory or hardware establishment. And so it is with all kinds of goods—they must be *carried* to the consumer, whether on the top of the mountains or in the bowels of the earth.

A few years ago the farmer that fattened a pig, or made a tub of butter, or a few cheeses, or dried a bag of apples, &c., must fry a box of doughnuts, harness up the old horse, tuck in a bag of oats, and make a journey of one to fourteen days to reach a market, and that often one of exchange, merely. Then it was the *farmer* that had to hunt up and seek out the consumer, as best he could. Now the city folks, who command the great wages that "Young Man" talks about, besiege every farm house, with the money in their fists, begging to buy everything raised, at prices which would have been deemed fabulous in those old truck-and-dicker times. So far as butter is concerned, Faneuil Hall has been moved up to St. Albans, Vt., and the cheese mart of the nation has migrated from New York city to Little Falls, N. Y. City people are beginning to be alarmed at the cost of living. Some cry out for a "Free Market;" some denounce "speculators;" some curse "capitalists,—some one thing, some another,—any thing or any body, by which they can express their sense of the deplorable condition to which they are reduced by the "extortionate people" who raise and furnish their daily food. A beautiful place, the city, for young men "who think of the future"—

who count the cost of making a home and of raising a family therein.

FOOT ROT IN CATTLE.

For the first time do I take my pen to write for or to the FARMER, and I do not know as I should have done so now, had I not seen an inquiry from H. J. Harris, in reference to that terrible disease, the foot rot in cattle. He wishes for a remedy to prevent and also to cure it. I do not know of a remedy to prevent it. But there is a remedy to cure it after the creature has an attack of it. It is this: when the creature is first lame, take the foot that is lame and fix it in the same way that an ox is shod, by placing the foot in a block, then take a chisel and cut off the ends of the claws, so that it will bleed freely, and in a day or two it will be well as ever. OTIS T. STREETER.

Westborough, Mass., Dec. 6, 1870.

REMARKS.—We do not understand why this operation should effect a cure, unless the disease is caused by an unnatural growth of the hoof. In the case of sheep, whose hoofs often become deformed, it is common to trim them down. It may be equally beneficial in the case of cattle. We hope that those who have had experience with this disease will favor the public with their experience. We fear that the disease is a more serious matter than is generally supposed, and cannot endorse our correspondent's advice. We hope the State Board of Agriculture will take immediate action in the matter, as we understand it has appeared among cattle at Brighton market.

ADVANTAGES OF FALL PLOUGHING.

A social gathering of farmers at the residence of Mr. E. M. Eaton, in Sunderland, Mass., Dec. 9th, briefly discussed the advantages of fall ploughing as follows:—Mr. Emmons Russell, a practical farmer of large experience, and a close observer, is fully convinced that his corn and oat crops are very much improved by ploughing the land the previous fall.

Mr. E. M. Eaton regards the practice of fall ploughing as an old traditional custom; or fashion followed by no beneficial results. By way of illustration he related an anecdote concerning a friend, possessing all the traits of a good thrifty New England farmer, who removed to Illinois and soon adopted the practice of fattening pork in the field, without shelter or floor, feeding the unground grain, simply because it was fashionable among the Suckers, knowing all the while it was not an economical practice.

Mr. Quartus Tower of Granby, is satisfied that ground should not be ploughed when wet, and a field may sometimes be in good condition to plough in the fall, when it would not in the spring.

Mr. Arthur Eaton thinks the additional cost of preparing ground to receive the seed will overbalance the increased value of the crop on fall ploughed fields.

L. P. Warner was of opinion that while some soils were not benefited and might perhaps be injured by fall ploughing, others were very much improved, and the succeeding crops considerably increased thereby. He had noticed in fields, a portion of which was ploughed in the fall, and the remainder in the spring, that the dividing line between the two sections were traceable by the different growth of crops during a whole rotation, extending over a term of four years,—the fall ploughed portion producing the largest crops.

Hard and stubborn soils if ploughed in autumn or early winter, usually yield to the ameliorating influence of frosts, while the drenching rains of spring time distribute the elements of fertility evenly through the soil, whence they are readily taken up by the growing crop. W.

Sunderland, Mass., Dec., 1870.

REMARKS.—We thank our correspondent for his model report. While we have not room for discussions in detail, we might publish the "gist," as the lawyers say, of a great many talks of farmers' clubs. But did not Mr. Eaton get his story of the Eastern man at the West wrong? When "out West" ourselves we heard it in this form: A New England man thought he would show Western people how to feed economically; so, for a year or two, he lugged up his corn and fed it out Yankee fashion, at the same time keeping an eye on the working of his neighbors' system, and a few years convinced him that he was wrong and they right, under all the circumstances of the location.

SHARP STICKS UNDER MUCK—THATCHING PEGS.

With all due deference to Mr. Josiah D. Cannings' opinion about "Sharp Sticks under Muck," published in FARMER of Nov. 19th, I beg to give an opinion, also, on the probability of how the sticks came under the muck and who sharpened them. Perhaps I may be out in my calculation; yet it may not by some be considered out of place if looked at from another point of view.

The farmers generally of this great go-a-head country may not be aware that all stacks of farm produce in the Old World, (England,) are well thatched with wheat straw, to the thickness of from eight to ten inches. The process of thatching is as follows:—A lot of straw is placed on the rick of wheat, barley or other grain or hay, into which a lot of hazel sticks, called "thatching pegs," sharpened at both ends, are stuck, on which more straw, threshed by hand, is neatly placed lengthwise. The sticks being sharpened at both ends allow them to be easier pushed into the stack and the more easily to receive the upper or succeeding coating of straw. These thatching pegs are put in as the thatcher progresses with his work, to keep the straw from slipping off. When the last covering of straw is put on, other pegs with small hooks on them are used, and put in at regular distances apart, round which a small cord of tightly twisted hay is once wrapped, and goes the whole length or round of the rick; when the pegs with the hooks are pushed down into the stack on the lower side of hay-band or cord, with the hook projecting over the lines which are placed about eighteen inches apart. Ricks of grain or hay so covered or thatched will and do defy the rains and snows of *seven years*, or more, though the farmers of this Western world may scarcely credit the assertion. I have actually known farmers keep their wheat in stack for ten years, and their clips of wool for twenty years, waiting for higher prices; but that was before "steam ships" navigated the deep waters of the Atlantic, or the plough turned up the sod of the beautiful prairies of the West.

My opinion about the sharp sticks under muck is, that at some early period, the land where the sticks were found embedded belonged to an English farmer, who pitched off thatch, pegs and all when the wheat was thrashed, which gradually rotted away, and to which year after year, more thatch, more pegs and more muck were added, never dreaming that his land was crying out for want of the muck he so carelessly suffered to go to waste. The farm, too, may have changed hands

several times, as it is no new thing here for farmers to "pull up stakes," and move on toward the setting sun, leaving a happy, comfortable home which they have worked, and striven, and plodded hard to make, to go and begin the world afresh, as it were, and build another home for the next dissatisfied successor. I shall be happy to see other remarks about "The Sharp Sticks under Muck."

JOHN WHATMORE.

Bridgnorth Farm, Dunleith, Ill., Dec. 5, 1870.

REMARKS.—Evidently our correspondent is after somebody, "with a sharp stick." But to see the "point" we must remember that fresh manure is called "muck" in England, and that in Illinois, farmers move barns instead of the huge piles of "muck" and straw which accumulate about them. His description of thatching hay and grain in England may be interesting to those who must either make stacks or "pull down their barns and build greater."

TOBACCO MARKET.

Owing to the dry weather the farmers have been unable to take down their tobacco, and buyers have not commenced to buy much. We may be able to give more sales soon. We are informed that the Southern and Western tobacco is very good, and that purchasers have invested more money in tobacco from those sections than usual at this time. Throughout the Valley and even among the mountain towns, the area planted with tobacco is yearly extending, and it is good this season. The farmer wants all he can get for it. If they combine as a whole and insist on a fair price and stick to it, they may obtain it, though buyers or middle men, as in all other kinds of business, are bound to have the largest share of the profits, though the farmer has the largest share of the taxes to pay, and needs all he can get to pay the expenses of raising his crops, to support his family, &c. We often hear it said that a nimble sixpence is better than a slow shilling, and if farmers can sell for cash now and get a good fair price, we should advise them to let the tobacco go; if not, all hold on to it, sort it well and pack it down, and it will sell before the year comes round.

SORTING TOBACCO.

Take down your tobacco on a moist day, and pack it. As you strip it, let one man strip, one make a careful selection, dividing it into three grades; have a table before you, a good fire in your room, and do it up nice and it will *sell* for better prices. When well sorted, pack each grade closely in boxes and await the buyers' time.

TOBACCO GROWER.

East Longmeadow, Mass., Dec. 20, 1870.

COLORING BUTTER.

Please inform us if there is anything we can color our butter with. If so, how much to the pound, &c. We are new beginners at butter making, and some of our customers object to the *color* of our butter. A SUBSCRIBER.

Harmony, R. I., Dec. 2, 1870.

REMARKS.—In the height of grass feed butter is yellow enough; hence the most natural way to color butter is to feed early cut and carefully cured hay, with messes of carrots and Indian meal. But such fodder is not always at hand, and the butter of cows kept on fair hay is often too light colored for the fashion, and some harmless coloring material is sometimes mingled with the cream, just to please the eye. If carrots are used, clean them nicely, then scrape off with a knife the yellow outside only, soak it in boiling milk about fifteen minutes, then strain through a fine cloth, and add the liquid to the cream before churning. Instead of injuring the butter, some think that a little carrot gives it a sweet, June taste.

Annotto is used extensively by cheese makers, and if pure, will answer as well for butter, but the common article in the market is said to be much adulterated. Mr. Willard recommends "Nichols' English Liquid" as the best.

Mr. Willard gives the following directions for preparing the common article for factory use. Similar proportions for small quantities. Take four pounds of best annetto, two pounds concentrated potash, five ounces saltpetre, one and a half pounds sal-soda, and five gallons boiling water. Put the ingredients into a tub, pour on the boiling water. The annatto should be enclosed in a cloth, and as it dissolves squeeze it through the cloth in the liquid. About two ounces of this mixture is sufficient for one hundred pounds of curd in summer. At first use too little rather than too much coloring matter of either kind.

Mr. A. R. Bailey of Elmore, Vt., makes the following statement in the Vermont *Watchman*, which was received since the foregoing was written:—

I have until recently used carrots for giving butter color, but when at the Dairymen's Association at St. Albans last winter, I learned from practical dairymen that annotto was by far the best agent for coloring butter. I was advised not to get it at the drug stores, but to get it all prepared in liquid form. It can be obtained of Jones & Faulkner, dealers in butter and cheese, 141 Genesee street, Utica, N. Y. I obtained some from the above named parties last spring and find it perfectly satisfactory.

AMERICAN IMPROVED SUGAR BEET.

Last spring you wrote an inquiry about the "American Improved Imperial Sugar Beet"—its characteristics, and wherein it differed from other sugar beets. Without giving you a very full description, I promised to send you a few specimens of this year's crop of this variety of beet. In accordance with that promise, I have this day directed to your address, by express, a box containing four beets. These are not selected on account of size, but to show you the shape and form of growth. You will notice how free they are from small fuzzy roots, so common on other varieties. I have raised this variety for ten successive years without a failure. Thus far, no insect has injured them. Since I have raised them as a field crop, doing nearly all the labor after thinning and first hoeing with horse and cultivator, my crop has been larger, and at an expense of but little more than is usual with corn and potatoes by the acre. The produce has often reached forty tons per acre. The four beets I send you weigh 8¼ each, or thirty-four pounds. I could show you one thousand bushels grown on one piece of land, that without any sorting would average eight pounds per beet. One of my neighbors drew a load three miles, to Middlebury, that was taken from a field of 1300 bushels; the load being made up of beets just as they grew, without any sorting. The load weighed 2350 pounds, and by actual count there were only

257 beets in the load; making the average weight per beet, 9¼ pounds. I have raised various varieties of turnips, carrots and beets, but no variety of roots could I raise as cheap as this beet, nor any that would produce so large an amount of healthy nutritious food to the acre. This beet has superceded all other roots in this vicinity.

Cornwall, Vt., Dec 14, 1870. HENRY LANE.

REMARKS.—The four beets were duly received, and according to Boston scales they weighed thirty-five pounds,—showing a gain of one pound from our correspondent's weight. They are certainly smooth well formed roots.

PROPER TIME TO CUT WHEAT.

A little experiment I made two years ago may possibly be useful to some of your readers. Previous to 1868, I had an idea that wheat was left to go over-ripe, and that it should be cut a few days earlier than it generally is. In order to test this opinion I took a few ears of wheat from part of a field which I considered about an average in soil and grain. These I hung up to dry. In six days I cut the crop and took more ears which grew near the place where the others had been cut. These I marked No. 2, and hung them up also to dry. In the course of a month I got a small pair of scales, nicely balanced, rubbed out the first sample and put it in one side, and then sufficient of No. 2, to balance it. This done I counted the grains, and, to my surprise, found in first sample 848 kernels, while in the 2nd there were only 737. Not satisfied with this, and having more wheat left from No. 2 sample, I tried it again with a fresh quantity, but with as nearly as possible similar results. From this it would seem that the loss in weight from cutting wheat a week before it was ripe is as nearly as possible one in seven; that is, one bushel in seven, or one acre in seven; or, supposing that the straw and quality of grain is a little better in the early cut, there must still remain a loss of four or five dollars per acre.

Of course I am as liable to errors as other writers, but I think this plan of experiment so simple that any one may try it for himself. The weight of a given number of grains I think a safer guide than the produce of a measured space.

JOHN WHATMORE.

Bridgnorth Farm, Dunleith, Ill., Dec. 10, 1870.

PROFITABLE PIGS.

I killed two pigs eight months old, that weighed 687 pounds when dressed. The following is what I sold them for and what they cost me.

687 pounds pork sold at 15 cents		$103 05
Paid for pigs when 4 weeks old	$10 00	
31 bushel meal at $1.13	35 03	
2 bushel corn at $1.20	2 40	
4 bushel potatoes at 50 cents	2 00	
10 bushel apples (wind falls) at 20 cents	2 00	
		$51 43
Leaving a profit of		$51 62

which I think is doing well for the first time; but I am in hopes of doing still better next year.

West Newfield, Me., Dec. 12, 1870. C. J. ADAMS.

DRY, CRACKED AND MISSHAPEN HOOFS IN HORSES.

I notice an inquiry in your paper what to do for a horse's feet when they become hard and dry. I am no horse doctor, but I can tell what I have done in a similar case. We keep on this farm two horses for farm work and other uses. In the summer of 1869 their feet became dry and hard. One is naturally flat-footed. His feet grew at the toe, and contracted at the heel, and cracked crosswise. The other had a straight hoof. His would split up and down the edges, were brittle, would crumble off so much that it was difficult to keep him shod. It appeared to me that they needed some grease or oil, or something else, to soften and toughen them. About the first of September, I took oil, which we keep in the barn to oil our wagons, and applied to their hoofs in front, and up into the edge of the hair, also to the bottom of the foot. We did this once a week for a spell; after that not so often. Their feet became better after the first application, and after a while became all right. This last summer we have used the oil with their feet. The oil seems to be just what was wanted, and brought their feet to the natural shape and condition. R. DAVIS.

Troy, Vt., Nov. 30, 1870.

BEANS FOR GARGET IN COWS.

Some six or seven years ago, I saw beans recommended for garget in cows, in the FARMER, by a gentleman who had a cow so badly affected that she was nearly spoiled, but she got to a stack of beans and ate what she wanted. The result was she was cured. Since then I have used nothing else, and it has never failed to cure as yet. Beans, we all know, will do no harm, and it is a medicine that all farmers have on hand, or ought to have. At first I soaked a pint to a feed, and mixed them with meal to make the cow eat them; but now I keep ground beans, as I think the meal is the best. This fall I had a very promising two-year-old heifer become so bad in one teat that I could scarcely milk it, and the milk was very chunky and bloody. I gave her one pint of the meal, mixed with other meal, for four days, when she was as well as ever, and has remained so. I think if cows were to be fed with bean meal two or three times a year, they would not be troubled with garget. C. F. LINCOLN.

Woodstock, Vt., Dec., 1870.

THE COW DIED AND THE CAUSE DISCOVERED.

In a communication of mine published in the FARMER, of (I think,) the 20th of June, I gave an account of a very singular case of sickness in one of my cows, and I think it due to the readers of your paper to inform them how it terminated.

Three days after I wrote the article alluded to, the cow made an ineffectual attempt to calve. In investigating the case, it was found that the os uterus had not relaxed, so that no help could be rendered without first cutting that part of this organ. This would no doubt have resulted in the death of the animal. In less than twenty-four hours the cow was dead. A post-mortem examination brought to light the following facts. The calf was doubled, so that the points of the gambrel joints were forward and uppermost, as the cow naturally stood. The head was also forward, but under and between the hind legs. Whether the calf died previously to the cow, is a matter of doubt; certainly from its appearance it could not have been very long previous. T. L. HART.

West Cornwall, Conn., Nov., 1870.

FOULS IN CATTLE.

I never saw a case of this disorder as bad as that described by H. J. Harris, of Stowe, Vt., in a late number of the FARMER, but I never knew a few applications of equal parts of soft soap and the pitch of white pine, simmered together, fail to cure any case of ordinary fouls. E. P. G.

Pelham, Mass., Dec. 5, 1870.

—Iowa has planted fifteen million trees within the last three years.

For the New England Farmer.

KANSAS.

A late writer says: "I wonder if the Almighty ever made a more beautiful country than Kansas! These broad prairies, starred and gemmed with innumerable flowers, threaded by dark belts of timber, which mark the winding streams, and clothed in softest green, are a joy forever." And surely nothing can surpass the transcendent beauty of the natural scenery of Kansas. It is difficult for the stranger to believe that cultivation and art have not lavished their utmost skill in shaping and adorning much of its natural scenery. Terrace rising above terrace, with such regularity and beauty, carries the mind back to the cultivated and ornamented grounds about fine old residences in the East, while many of the bluffs look like forts in the distance. Then the air is so perfectly clear as to bring within the circle of vision vast extents of these rolling prairies, dotted here and there with cultivated patches about the cottages of the settlers, and numerous herds of cattle fattening upon these rich, luxuriant grasses. Until within the past year, not less than forty million acres of these nutritious grasses, in Kansas alone, have gone to waste, or have served only for the vast herds of buffaloes and other wild animals, which have roamed at pleasure over these broad acres.

Reckoning these grasses at the value of only two dollars per acre, here is a waste of eighty million dollars annually of a food-producing element.

But this, in the near future, is all to be changed. It is said that not less than a thousand immigrants a day have been finding homes in Kansas during the fall of 1870, and this flowing tide still continues even into the winter. These immigrants are from England, Scotland, Norway, Sweden, Germany, Canada and the Eastern, Middle and Western States of our own country; a majority of them coming from the Western States. Kansas is the last State of rich lands, within favorable latitudes to fill up; and the tide of immigration is so great, that she is filling up with amazing rapidity.

At present the State has a tax duplicate of less than one hundred million dollars. In fifteen years with the rapid development of Kansas, under her railroad system and general enterprise, she will have a tax duplicate of one thousand million dollars. Who will make this vast amount of money, destined to be in the State within the next fifteen years? Of course, those who own, occupy and improve the property that makes value for tax duplicates. Need any be surprised that so many are hastening to secure their share of this tremendous prize?

And what has produced and is producing this great immigration, which no other State has ever had? It is the fame of her surprisingly healthful climate, and her wonderfully productive soil. The choice lands of the State are being taken by these settlers under the Pre-emption Act of 1841, and under the Homestead Act of 1862.

The Homestead Act gives to every loyal citizen of the United States, who has arrived at the age of 21 years, or is the head of a family, whether male or female, 160 acres of land, to be located on the public domain, wherever the settler chooses, at the nominal cost of $18, which is for the survey and necessary papers. Foreigners who have declared their intentions of becoming citizens, and soldiers under age, are entitled to the benefits of the Homestead Act.

Population, capital and production make States, and they are making Kansas; and she now presents to the world a field as broad, a chance as great, a prospect as promising as the world ever opened up for the energy and enterprise of men.

Stock raising and herding are most remunerative, averaging not less than one hundred per cent. per annum, on capital invested. And Kansas will soon become the greatest beef-producing State in the Union. Her boundless ranges of natural pasturage, are capable of supporting millions of cattle, which do well and fatten during the entire year on the open range. And her richest of soils, varying from three to thirty, and, in places, over fifty feet in depth, will compensate the husbandman for his labor, in yielding the most bountiful crops of all the cereals, vegetables and fruits of the temperate latitude.

At the National Pomological Congress, held in Horticultural Hall, Philadelphia, Sept. 15, 1869, Kansas bore off the first premium, over all the other States in the Union, for her collection of "Fruits, unequalled for *size*, *beauty* and *flavor*."

The writer having just returned from a second tour through this young and buoyant State of the West, is more fully impressed with the superior advantages that Kansas offers over any other State, especially to capitalists and to young men who wish to make themselves a delightful home in an air the purest, a soil the richest, and a land the fairest that the sun shines upon.

Kansas, occupying as she does the geographical centre of the American Union, is destined to become the centre also of a countless population, and of vast interests. In her school system and educational advantages she boldly steps out in advance of all other States in making *free* all her higher institutions of learning, throwing wide open the doors of her seminaries, colleges and universities, and this not to *one* sex only, but to *both*, and to-day, even in her *free* State Agricultural College, there are more girls than boys, receiving the same course of instruction, and graduating with the same honors.

The eastern slope of the Rocky Mountains,

embracing Kansas, Nebraska, Colorado and Wyoming, owing to its peculiarly invigorating atmosphere, will yet produce the intellects, that will mould the destinies of nations and give laws to the world. E. M. CLEVELAND.

New Braintree, Mass., Dec. 20, 1870.

REMARKS.—Our disposition is to look on the bright rather than the dark side of all objects presented to view; still it is possible to polish up some things so bright and glistening as to compel one to turn away his eyes. We think our correspondent makes Kansas shine rather brighter than other visitors and the residents in that young State will think just, unless they have land they wish to sell. His remark that "not less than one hundred per cent. per annum on capital invested" in stock raising in Kansas is realized, leads us to mistrust that his observations during his two visits were not very thorough. Stock raising and fattening is undoubtedly good business in Kansas, but we mistrust there are many items of expense and risk omitted in any calculation which arrives at a conclusion of one hundred per cent. per annum. We mistrust also that there are exceptions to our correspondent's representations of the "invigorating atmosphere" which rests upon the rich soil of Kansas.

For the New England Farmer.

MEDICAL TOPICS.

BY A MEDICAL MAN.

Poisons; their Symptoms and Treatment.

CONCLUDED.

PHOSPHORUS.—This is an irritant poison, used in the manufacture of matches.

Symptoms.—A hot unpleasant taste, an acrid, burning sensation in the throat and stomach, nausea and vomiting, the matter vomited being of a dark color and emitting white fumes; the pulse is small and frequent, and not unfrequently violent convulsions end the scene.

Treatment.—Give an emetic promptly; also copious draughts of magnesia in water, and mucilaginous drinks.

POISONOUS FISH.—Conger Eel, Crawfish, Dolphin, Old Wife, Spanish Mackerel, and several others.

Symptoms.—In an hour or two—often in a much shorter time—after the fish has been eaten, a weight at the stomach comes on, with slight dizziness and headache, a sense of heat about the head and eyes, considerable thirst, and often an eruption of the skin; occasionally convulsions and death.

Treatment.—An emetic of ground mustard or of white vitriol (*sulphate of zinc*) must be speedily given, with copious draughts of warm water. This should be followed by an active purgative, and then by vinegar and water. Laudanum may be given if there be indications of spasm, and stimulants may be necessary in some cases.

POISON HEMLOCK.—See Conium.

POISONOUS INSECTS.—Bee, Gnat, Hornet, Scorpion, Wasp, &c.

Symptoms.—In general, the sting of these insects occasions only a slight degree of pain and swelling. But sometimes the symptoms are more violent, and sickness and fever are produced.

Treatment.—Rub hartshorn (ammonia) and sweet oil on the affected part; and a rag moistened in the same, or in salt and water, may be kept upon it till the pain is removed. Moistened clay is an excellent remedy. A few drops of aqua ammonia or hartshorn may be given frequently in a little water, and a glass or two of wine or of weak sling may be taken if the symptoms are severe. The sting may be removed in most cases by making a strong pressure around it with the barrel of a watch key.

POISON IVY.—Poison Oak. (*Rhus toxicodendron.*)—Symptoms and treatment like Aconite, Conitum, &c.

POISONOUS MUSHROOMS.—Several kinds of mushrooms are poisonous, and have been eaten by mistake.

Symptoms—Nausea, heat and pain in the stomach and bowels, vomiting and purging, great thirst, small and frequent pulse, stupor, dilated pupil, cold sweat, fainting, convulsions and death.

Treatment.—Clear the stomach and bowels by giving an emetic of ground mustard, or of white vitriol (*sulphate of zinc,*) followed by Epsom salts (*sulphate of magnesia,*) and large stimulating enemas. After the poison has been thoroughly evacuated, small quantities of brandy and water may be given.

POISONOUS SERPENTS.—Boa, Copperhead, Mocasin, Rattlesnake, Viper, &c.

Symptoms.—A sharp pain is felt in the wounded part, which soon extends over the limb or body; great swelling, at first hard and pale, then red, livid and gangrenous in appearance. Faintings come on, with vomiting, convulsions, and sometimes jaundice. The pulse is small, frequent and irregular, the breathing is difficult, the sight fails, the intellectual faculties are deranged, cold sweats come on, and inflammation, suppuration, and sometimes extensive gangrene takes place.

Treatment.—Apply a tight ligature between the wound and the heart; draw all the blood possible, by means of a cupping glass, then apply a hot iron, and afterwards cover the wound with lint, dipped in equal parts of sweet oil and hartshorn. Warm drinks and small doses of ammonia, to cause perspiration, may be given.

POISON SUMACH.—Dogwood, (erroneously

so called)—*Rhus venenata*. For symptoms and treatment see Poison Ivy.

POKE.—Scoke, Cokum, Garget-root.—The botanical name of this plant is *Phytolacca decandria*. The root, leaves and berries are poisonous; but the young shoots have been cooked and eaten, like asparagus, and are quite harmless. Symptoms and treatment like Blue Flag, Colocynth, &c.

POTASH.—*Potassa*.—Carbonate of Potash, Pearl Ash, Saleratus, Strong Ley, Nitrate of Potash, Saltpetre, Chromate of Potash. With the exception of the Chromate and Bichromate, the symptoms and treatment are like Ammonia. For those of the Chromate and Bichromate, see Chrome.

PRUSSIC ACID.—Hydrocyanic Acid. This exceedingly active poison is found in combination with several metals, in the oil of bitter almonds, in the leaves of the common laurel, and sparingly in the seeds or stones of the peach, cherry, plum, &c.

Symptoms.—When the dose is large, death almost immediately ensues. In smaller quantities, it causes pain in the head, stupor, nausea, giddiness, great debility, a small, vibrating pulse, eructations having the flavor of almonds, spasms, convulsions and death.

Treatment.—Give a solution of saleratus (*bicarbonate of potash*,) or of carbonate of ammonia, and then administer a weak solution of copperas (*sulphate of iron*.) The cold douche, or an effusion of cold water upon the head and spine, have been recommended.

RED PRECIPITATE.—See Mercury.

RHUS TOXICODENDRON.—See Poison Ivy.

RUM.—See Alcohol.

SCHEELE'S GREEN.—See Arsenic.

SILVER.—Nitrate of Silver, Lunar Caustic.

Symptoms.—Headache, vomiting, pain in the bowels, diarrhœa, palsy, convulsions and death.

Treatment.—Give a strong solution of common salt, (*chloride of sodium*,) and follow with mucilaginous drinks, such as flaxseed tea, slippery elm, etc.

SMUT OF RYE.—See Ergot.

SODA.—Sal Soda, Carbonate of Soda, &c. Symptoms and treatment like Ammonia and Potash.

STRAMONIUM.—Thorn Apple, Jameson weed, Stinkweed, &c. Symptoms and treatment like Aconite, Conium, &c.

STRYCHNIA.—Strychnine. See Nux Vomica.

SULPHURIC ACID.—Oil of Vitriol. Symptoms and treatment like Muriatic Acid, Nitric Acid, etc.

TARTAR EMETIC.—See Antimony.

TARTARIC ACID.—See Acetic Acid.

THORN APPLE.—See Stramonium.

TOBACCO.—(*Nicotina Tabacum*.) Symptoms and treatment like Aconite and other narcotics.

TIN.—Chloride of Tin, Oxide of Tin, Solution of Tin. Symptoms and treatment like Arsenic, Copper, &c.

VERATRUM.—*Veratrum album* or White Hellebore. *Veratrum viride* or Green Hellebore. Symptoms and treatment like Aconite.

VERDIGRIS.—See Copper.

VERMILLION.—See Mercury.

VINEGAR.—See Acetic Acid.

WHISKEY.—See Alcohol.

ZINC.—Sulphate of Zinc or White Vitriol. Symptoms and treatment like Arsenic, Copper, &c.

BEST MILK-PRODUCING FOOD.

Our correspondent T. L. Hart, of West Cornwall, Conn., has written an article for the *Germantown Telegraph* from which we make the following extract:—

There is no doubt a difference in the quality of milk in different cows, some being rich in caseine or cheese, and that of others in butter, yet as a rule the milk will be in a great measure what it is made by the feed of the cow. The milk from the same cows may be varied by feed from eighty, by the lactometer, up to a hundred and fifteen degrees, the highest number being the best, and such as is produced by the heaviest feed.

In a carefully-tried experiment which I made last winter I found that heavy feed, such as corn, wheat and rye shorts, fed to twelve cows, pound for pound, did not make as much milk as wheat-bran, into nine quarts a day, and I have no doubt that for a time this would invariably be the result, yet I should not dare to continue for any considerable length of time to feed my cows upon wheat-bran, alone, as it would undoubtedly diminish the strength of the cow and soon reduce her to a condition that she would be incapable of giving very much milk. I am now feeding to twelve cows two bushels of wheat-bran mixed with one bushel of corn-meal ground in the cob, with very satifactory results. The milk is good, the strength of the animal is kept up, and a diminished amount of hay will keep the cow in good thriving condition. I feed twice a day.

It is yet an open question whether the feed should be fed dry or wet. There is no doubt but that in cold weather it would be much better if the water, which is required by cows in milk, could be warmed. If taken into the system while at a very low temperature the process of digestion will be retarded until the temperature of the water is raised to blood-heat. In warming this water digestion is not only retarded, but there will be a loss of a certain amount of food, which, like fuel, is consumed in keeping up the heat of the body; and this accounts for the fact that a herd of cattle require very much more food in extremely cold weather than they do in warm weather. It will be evident, therefore, that

a large amount of food may be saved by warm stabling in cold weather and consequently a much greater secretion of milk secured.

The great mass of the community are no doubt ignorant in regard to the great difference in the quality of milk made by the different kinds of feed. Milk made from a cow fed upon turnips and buckwheat-bran or buckwheat-shorts, is totally unfit for a young child, or its mother, and there is no doubt but that the mortality among children is often caused by improper food of which the milk is made. The physician knows the importance of having the milk from a new milch cow assigned for a young child; the why and wherefore very likely he does not know. He probably does not know that the milk from a farrow cow is one-third heavier and one-third richer in caseine than that from a new milch cow, and therefore is not as well adapted to the wants of the child, nor does the mother understand that the cause of the child's illness is owing to some improper food eaten by the cow. If I were desirous of making a given amount of milk the best adapted to the use of the greatest number of children, I would feed the cows on equal parts (in pounds) of oats wheat-bran and Indian corn and the best of hay and apples.

Until we become accustomed to trying experiments, we shall not know for a certainty the quantity and quality of food that will, when fed to a lot of cows, produce the greatest amount of really good milk for a given amount of feed, nor shall we know whether the cutting of hay for our milch cows in winter will pay for the extra expense and labor of doing it. Some of our milkmen who have tried cutting are of the opinion that it pays well for the trouble and some contemplate steaming.

Roots, especially carrots, increase the flow of milk and of the best quality, and will tend to keep the cow in good health. Apples will increase the quantity of milk nearly as much as turnips, and of much better quality.

In making milk there is nothing more important than good early-cut hay. Without this it may be doubted whether milk can be made with profit.

SOMETHING ABOUT MUCK.

Several correspondents having lately revived, through our columns, the by no means new question as to the value of muck, we present for their consideration a word or two upon the same subject.

Experiments in the analysis and practical use of muck are of such number and the results have been of such a nature as to prove that it should never be used in its crude state, or on being immediately thrown up from its bed. The time it should be allowed to decompose depends to a considerable extent upon the character of the deposit. If it has been lying in stagnant water, or if water has been soaking through it—in which latter case it will be found of but little value for fertilizing purposes—it should remain exposed to the action of air, rain and frosts for at least a twelvemonth. If, on the other hand, it comes from a dry situation it may be used as an absorbent after having remained exposed for but three or four months. Without this *seasoning* muck is of very little value.

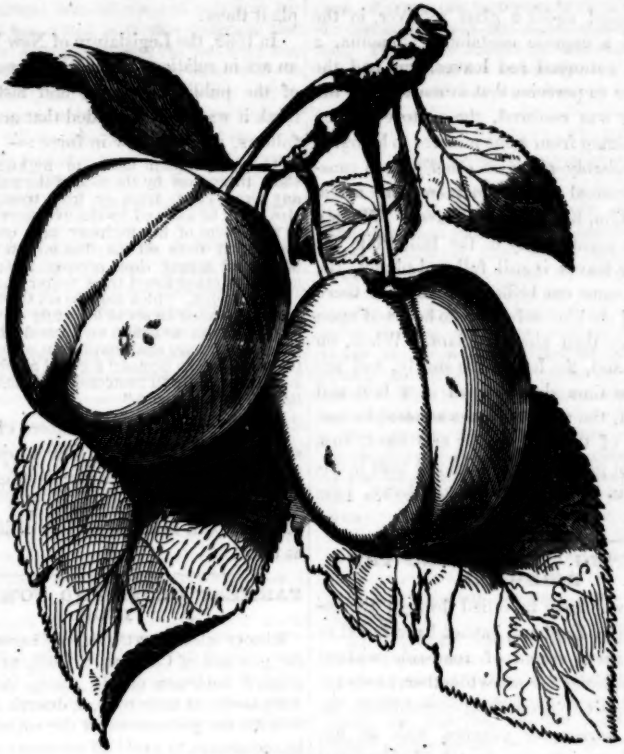
It is as an absorbent that we place the greatest value upon muck. When thoroughly dried it is not only a complete absorber, but it is also a most perfect deodorizing agent; so that by its use in the cow stable the most valuable part of the voidings of a stock of cattle, and that usually suffered to go to waste, the liquid portion, is not only saved, but absolute cleanliness, and therefore healthfulness, is secured. But when saturated, the muck should not be left where it will wash, as in a short time it would become almost valueless, by the loss of that which it contained through absorption. It must remain in some covered situation until hauled upon the land.

Again, muck forms a most useful ingredient in the compost heap. Used for this purpose, in connection with stable manure, lime, ashes, salt, &c., it becomes a valuable dressing, aside from greatly augmenting the quantity of the farm fertilizers. For many uses, especially for corn, garden crops, and as a top dressing for grass lands, it is regarded by all who have ever used it as better than pure dung; especially if applied on light open soil, liable to suffer from drougth.

The question is often asked by farmers if muck used alone is of itself any advantage to the land. This question can be quite accurately answered by saying that generally it is not. Its value in this respect results from its mechanical action. On sandy, porous soils, such as are liable to leach, and to readily feel the effect of drought, an application of muck would give—in consequence of its quality of attracting and retaining moisture—greater consistency to the soil; and upon clayey soils it would also serve to render them less stiff and rigid and more susceptible of cultivation.

In some of his forcible and conclusive sentences, Liebig has shown how peat or muck, consisting for the most part of inert vegetable matter, and which has ceased to undergo further voluntary decomposition, often contains substances highly injurious to vegetation, such as sulphate of iron, free phosphoric and sulphuric acids; but that these are capable of being neutralized and turned to plant food by the action of lime. This should direct all farmers in the use they make of muck as a fertilizer.—*Maine Farmer.*

—Indiana proposes to consolidate its present State University, Agricultural College and other State educational institutions into one great University, to be located at Indianapolis.



THE PENOBSCOT PLUM.

This fruit originated in the garden of James McLaughlin of Bangor, Me., and was introduced by B. F. Nourse and Henry Little of Bangor. The illustration was drawn from fruit raised by Mr. Henry Vandine of Cambridgeport, Mass.

The tree is a very thrifty grower, bears young, and the specimens we have seen of it have been unusually free from wart or blight of any kind. Fruit large, about the size of the Jefferson; oblong, marked with a deep suture; stem an inch in length, slender, and set in a small cavity; skin, orange yellow, smooth and fair, with no blush. Mr. Vandine represents it as among the best, and well worthy of cultivation.

—The Laconia *Democrat* says that the ravages of the new cabbage worm were stopped the past season in one place by a liberal coating of fine salt on the cabbages one morning while the dew was on.

COLOR IN AUTUMNAL FOLIAGE.

Mr. I. Wharton, in the American *Journal of Science* observes:—If chlorophyl, the green coloring matter of leaves, should be like many other greens, a compound color, it must have for one of its elements, a vegetable blue, capable of being reddened by acids.

If the juices of leaves kept in a neutral condition by vital force, or by alkaline matter brought in the sap from the earth, should, when circulation ceases, become acidified by the atmospheric oxygen, those juices would then be capable of reddening the vegetable blue of the chlorophyl.

If, however, that vegetable blue should be thus reddened, it ought to become blue again when exposed to an alkali; or in other words, if green leaves should be reddened in the autumn in the manner here suggested, by the action of the oxydizing atmosphere, they ought

to return from red to green, if immersed in an alkaline atmosphere.

He exposed under a glass receiver, in the light, with a capsule containing ammonia, a variety of autumnal red leaves, and had the gratification to perceive that in most cases, the green color was restored, the restored green color remaining from some minutes to hours.

Frost probably plays no other part in causing the autumnal tints, than merely to arrest the circulation, by killing the leaves. When a sharp frost occurs early in the fall, while the pulp of the leaves is still full and plump, the red colors come out brilliantly, because there is plenty of the blue substance to be acted upon by the juices then also abundant. When, on the other hand, the leaves die slowly, and are at the same time slowly dried in a late and dry autumn, the pulp becomes so meagre and the cuticle of the leaf so dry and hard, that an abundant production of fine red tints is impossible, and brown, the color of decay, predominates.

PLANTING TREES ALONG THE HIGHWAYS.

Persons who have travelled through the interior of New England, cannot have failed to notice the great extent of road-side without trees. Sometimes for miles together, along the sides of extensive pastures and sprout-lands, the roadside is barren, or covered with an unsightly and unprofitable growth of alders and other wild shrubs, or, what is worse, burdocks, thistles or milk-weeds.

This ought not to be. If these spaces were set with the sugar maple, and well cared for, in the course of years they would well nigh supply the whole population with all the sugar it would wish to consume, if added to what is already produced in sugar orchards. When the trees become past producing the sugar making fluid, they would form an immense amount of valuable timber for mechanical purposes, and the refuse portions make the most valuable fuel.

But these are not all the good offices which they would perform. Numerous tracts of New England lands suffer for lack of moisture, which would be greatly benefited by trees as condensers of vapor, and thus enable such soils to produce remunerative crops. The health which such trees would tend to promote, and the charming beauty they would impart to the landscape, ought in themselves to be a sufficient motive to set us at work to plant them.

In 1869, the Legislature of New York passed an act in relation to planting trees alongside of the public highways, and last winter, we think it was, they amended that act to read as follows, and it is now in force:—

"Any inhabitant liable to highway tax who shall transplant by the side of the public highway any forest shade trees or fruit trees, of suitable size, shall be allowed by the overseers of highways in abatement of his highway tax, one dollar for every four trees set out; but no row of elms shall be placed nearer than seventy feet; no row of maples or other forest trees nearer than fifty feet, except locust, which may be set thirty feet apart; fruit trees must be set at least fifty feet apart, and no allowance, as before mentioned, shall be made, unless such trees shall have been set out the year previous to the demand for said abatement of tax, and living and well protected from animals at the time of such demand."

We hope that the Legislature of Massachusetts, at its next session, will adopt the foregoing law, or one similar in effect, and that all land owners where road sides are barren of trees, will avail themselves of its privileges at once.

FARMERS' CLUBS AND TOWN MEETINGS.

History informs us that when Charles II. granted the province of Carolina, in 1663, to eight distinguished noblemen of his realm, the celebrated John Locke, at their request, drafted an elaborate code for the government of the colony, in which he endeavored to avoid all the errors and to combine all the excellencies of existing and past systems of government. But however beautiful in theory the scheme of the great philosopher might have been on paper, it was found to be utterly impracticable and useless in the wilderness; and all attempts to put it into practical operation were soon abandoned, and the people proceeded to adopt in its stead such simple rules and regulations as were necessary to govern their intercourse with each other and with the wild men and wilder beasts by whom they were surrounded.

While the plan of government that was devised by this great English philosopher to serve as a model for the new world, and to shape the legislation of a continent, is remembered only as a failure, the deliberations of little collections of unlettered pioneers became the model of State and national governments.

May we not hope that what the town meeting has done for the government of the country, the farmers' club may yet accomplish for the advancement of agriculture? Like John Locke's constitution, the present organization of Agricultural Boards and Societies fails to secure the hearty sympathy and co-operation of those for whom it was

devised. Whatever difference of opinion there may be as to the cause of this want of co-operation between agricultural associations and practical farmers, all will agree that it is very desirable that greater unity of action should be secured; that practical farmers should participate more freely in the management, and take a more active part in the proceedings of agricultural societies. Among other means for the accomplishment of these objects, we have looked to the formation of Farmers' Clubs and Town Shows as the most hopeful; as a beginning at the right place,—among the farmers themselves.

The farmers of Maine appear to be taking the lead of those in the other New England States in the organization of Farmers' Clubs, and we print in another column an article by one who has had much experience in their management and operation there, and most heartily commend his suggestions to the consideration of our readers.

CATTLE DYING IN CORN FIELDS.—During the past dry season many cattle have died after being turned into fields of corn stalks. Some have supposed that death was caused by eating the smutty ears which were rejected by the harvesters. Mr. Elmer Baldwin, who has several times witnessed post mortem examinations of animals that have thus died thinks the idea of smut being fatal is erroneous, and says, in the *Prairie Farmer*:—

The common practice is to keep cattle on the short fall feed, or with light feeding, till the cornfield is cleared, when they are turned in with empty stomachs and ravenous appetites; there is generally a scarcity of water, and the fatal results follow. The cause, evidently, is too rapacious and full feeding of the *dry material*, without sufficient water.

In all the cases he had examined, the second stomach, commonly called the "manifold," was packed with the masticated corn husks, so dry and hard that the point of a common butcher's knife would only, with considerable effort, be made to penetrate its substance, while the coats of the stomach were disorganized and separated, showing that a violent and fatal inflammation had supervened.

With plenty of salt and access to running water at least twice a day, he thinks there is no danger from turning cattle into stalk fields.

THE FOOT AND MOUTH DISEASE.—We hear of the appearance of this disease in various parts of Massachusetts, but have no intelligence of any action by the committee of which Dr. Loring is chairman, appointed by the Board of Agriculture to confer with the authorities of the State in relation to the adoption of measures to prevent the spread of the disease. Mr. A. Scott, of North Blackstone, says in the *Patriot*, there are cases which cannot be accounted for otherwise than by supposing that it was propagated by contagion through the air. In an article in the *Maine Farmer* by S. L. Goodale, Esq., fumigation of the stable by burning bits of brimstone on live coals in a suitable vessel, is recommended as a preventive. Care and judgment, however, must be exercised in its use. An ounce or two is enough to burn at once for a barn of from six to twelve or twenty cattle, and the operation should be repeated regularly twice a day. The fumes should pervade all parts of the room equally, and not be stronger than the attendant can bear with moderate discomfort.

For the New England Farmer.

WINDOW GARDENING.

In reply to the inquiries of Etta Parker in last week's FARMER we would say that we think a garden might flourish finely on a light-stand. Sides of thin wood, such as cheese boxes are made of, could be nailed around it, fastening them securely at the corners with brads; and lining the inside with zinc, either up to the top edge, or nailing it one inch below it; or a tin pan might be made to fit closely in, which would be more easily procured. This lining is required, else the water would leak out, and the wood warp or swell.

To prepare the soil, scatter small bits of charcoal over the pan, with a good sprinkling of the dust; this will act both as a purifier and a fertilizer, and prevent all mouldiness or decay. Upon this foundation spread a thin coat of perfectly decayed stable manure, and over that place rich loam, with a goodly mixture of sand—at least one-quarter—silver sand, such as is used for scouring, will answer the purpose.

To ornament the exterior of the box, sections of pine cones can be nailed on with small brads, and varnished with carriage varnish; or coffee berries and pumpkin seeds can be made into flowers, or glued on in fanciful shapes, with rice seeds intermingled; then varnish the whole. Split rattans could be nailed on in mosaic work, or split sticks of maple, oak, birch, &c., can be used and arranged in ovals, crosses or squares. Miss Etta can exercise her own ingenuity in its adornment. It would be a great advantage to be able to move it about, as the chief objection to "*window boxes*" is in their being stationary, the plants are likely to grow one sided, and present a finer appearance to the passer-by than to their owner, as she sits beside them.

Vines are great additions to the "*boxes*," and they could be trailed about the stand with very good effect.

We saw in Cleveland, Ohio, several years since, an exquisite floral design. It belonged to the matron of a Children's Asylum, and was her own work. It was a stand constructed out of the gnarled roots of trees, bushes, and grape vine branches. A tripod formed the standard; upon that, crooked branches held up an oval tin pan which was firmly nailed to them. This was painted green, and filled with earth. Vines of *Moneywort*, *Tradescantia*, *Maurandia* and *German Ivy* trailed all about it. *Lycopodium* was mingled with them. A winter flowering Fuchsia, "*Speci-*

osa"—was in the centre, and was filled with its waxen pink and crimson bells. A *white Geranium* was on one side, and a bright pink of the same species, flanked the other. A white *Eupatorium* and scarlet *Bouvardia* completed the loveliest stand we ever saw. Any ingenious boy, or even a girl who liked to use hammer and nails, could construct a similar one. A wooden circle could be substituted for the tin pan, and gnarled roots and branches would ornament prettily.

We hope Miss Etta will try her hand at its manufacture, and inform the readers of the Farmer of her success. S. O. J.

For the New England Farmer.

COLORING BUTTER.

USE OF SALTPETRE.—WASHING BUTTER.

"A Subscriber" at Harmony, R. I., desires information on this point. As we are coloring butter weekly, with a new preparation, called Annotto, we obtained from Whitman & Buzzell, of Little Falls, N. Y., who are the agents for its sale, we can tell of its desirability. X. A. Willard, the great authority on dairy matters, recommended it to us and procured it from the above-mentioned firm. It is much used in New York and Pennsylvania by dairymen of the highest stamp. The famous butter of Philadelphia is all colored with it.

Annotto-ine is produced from the seed of a plant grown in Brazil. The process is to wash the coloring from the surface of the seeds, by letting them soak for some time in cold water. When this is done, the water is drawn off and the Annotto-ine is dried and then pulverized. The old process was to boil the seeds, but this dissolved the entire seed, which was not desirable, and did not produce so pure an article for coloring butter. The Annotto-ine is sold at $2 per pound. One pound of pure potash, of full strength, and half a pound of sal soda are mixed with it, according to directions furnished by the agents, who will also furnish the potash at twenty-five cents per pound, and the sal soda for six cents per pound, and with cold water, four gallons of Annotto-ine can be prepared. This should be bottled and corked tightly, and kept in a dry place.

When the cream is ready for the churn, pour in one large tablespoonful of it to every six quarts of cream. This amount will give a fine golden hue and a good flavor; it *certainly* does not detract from the sweetness of the butter. We have used it for six weeks, and are much pleased with it, having always had a decided dislike to tallowy butter for table use. All who see our butter exclaim, "where did you get your butter? It exactly simulates the color of June butter."

O. S. Bliss, Secretary of the Vermont Dairyman's Association, in an essay delivered at Montpelier, March 5, 1870, says of Annotto:

"It is a purely vegetable extract, and the Brazilians, who manufacture it, make use of it to tint very many of the most delicate and luxurious dishes served at their repasts. We have a friend who has traveled in South America, and he speaks of it as analogous to our butter in some respects; one of which is that the really pure article is of a comparatively imperishable or self-preserving nature, and that it imparts to milk, butter and cheese, in some degree this preservative principle."

He also says in the same essay:—

"Many persons affect to be very averse to the use of colored butter, but we have never seen one yet who does not like good, rich-looking, yellow butter better than a poor, lardy, white article, and would not eat a nicely colored article much more satisfactorily than the other, provided, of course, that he does not know that it is colored; and the smartest of the class are unable to distinguish the colored from natural butter of the same shade of color."

To all of which we say amen. Mr. Bliss has taken some exceptions to our style of butter-making, but we fully agree on the subject of "coloring" it. As to the saltpetre, to which he alludes in your paper of Nov. 19, the practice of twenty years has confirmed us in the belief of its non-injurious properties in *infinitesimal* doses. It prevents all cheesy and bitter taste in the butter, so prevalent at this season in small dairies, and so disgusting.

A prominent farmer in Grafton County went to Boston some years since with his butter. The market price was fifty cents—he could get but thirty-five. With praiseworthy curiosity, he insisted upon knowing why his butter could not command the same price in market, and what his wife should do the next season to make it saleable? He was answered that the best of butter was cured with salt, *saltpetre* and sugar—so much to a pound; that the two latter ingredients were as preservative as salt, and if combined with it, would produce an A No. 1 article. He profited by the advice, and has ever since received the highest price for the product of his dairy.

As to washing butter, we must agree to disagree with Mr. Bliss, but should like to place some of our unwashed Alderney butter, made in September, beside of his washed butter, in the spring, and see if he could not discern a "difference in the sweetness." He also takes exceptions to the amount of butter made by "Mrs. A.'s cows."

We know of several Alderney cows which averaged fourteen pounds of butter per week, all the summer months. A four-year-old made from eleven to thirteen pounds last summer, for many weeks. We are strangers to Mr. Bliss, though well known to his friend, X. A. Willard; but we venture to assert that should we meet we should enjoy a friendly chat on butter and its manufacture, even though we might differ on some points. S. O. J.

Jan. 2, 1870.

—Thomas J. Field, of Northfield, Mass., has sold six head of Short-horns to the Agricultural College and two to Mr. Ellison, of Leesburg, Va.

A WINTER POEM.

BY J. G. WHITTIER.

A sound as if from bells of silver,
Or elfin cymbals smitten clear,
Through the frost-pictured panes I hear.

A brightness which outshines the morning,
A splendor brooking no delay
Beckons and tempts my feet away.

I leave the trodden village highway,
For virgin snow-paths glimmering through
A jewelled elm-tree avenue;

Where, keen against the walls of sapphire,
The gleaming tree-bolls, ice-embossed,
Hold up their chandeliers of frost.

I tread in Orient halls enchanted,
I dream the Saga's dream of caves
Gem-lit beneath the North Sea waves!

I walk the land of Eldorado,
I touch its mimic garden bowers,
Its silver leaves and diamond flowers!

The flora of the mystic wine-world
Around me lifts on crystal stems
The petals of its clustered gems!

What miracle of wierd transforming
In this wild work of frost and light,
This glimpse of glory infinite!

This fore gleam of the Holy City,
Like that to him of Patmos given,
The white bride coming down from heaven!

How flash the ranked and mail-clad alders,
Through what sharp-glancing spears of reeds
The brook its muffled water leads!

Yon maple, like the bush of Horeb,
Burns unconsumed; a white, cold fire
Rays out from every grassy spire.

Each slender rush and spike of mullein,
Low land shrub and drooping fern,
Transfigured, blaze where'er I turn.

How yonder Ethiopian hemlock
Crowned with his glistening circlet stands!
What jewels light his swarthy hands!

Here, where the forest opens southward,
Between its hospitable pines,
As through a door, the warm sun shines.

The jewels loosen on the branches,
And lightly as the soft winds blow,
Fall, tinkling, on the ice below.

And through the clashing of their cymbals,
I hear the old familiar fall
Of water down a rocky wall.

Where from its wintry prison breaking,
In dark and silence hidden long,
The brook repeats his Summer song.

One instant flashing in the sunshine,
Keen as a sabre from its sheath,
Then lost again the ice beneath.

I hear the rabbit lightly leaping,
The foolish screaming of the jay,
The chopper's axe-stroke far away;

The clamor of some neighboring barn-yard,
The lazy cock's belated crow,
Or cattle-tramp in crispy snow.

And as in some enchanted forest
The lost knight hears his comrades sing,
And near at hand, their bridles ring.

So welcome I these sounds and voices,
These airs from far-off Summer blown—
This life that leaves me not alone.

For the white glory overawes me;
The crystal terror of the seer
Of Chebar's vision blinds me

Rebuke me not, O sapphire heaven!
Thou stainless earth lay not on me
This keen reproach of purity!

Let the strange frost-work sink and crumble,
And let the loosened tree boughs swing,
Till all their bells of silver ring.

Shine warmly down, thou sun of noontide,
On this chill pageant, melt and move,
The Winter's frozen heart with love.

And soft and low, thou wind south-blowing,
Breathe through a veil of tenderest haze
The prophecy of Summer days.

Come with the green relief of promise,
And to this dead, cold splendor bring
The living jewels of the Spring!

FARMERS' CLUBS.

The long evenings are now at hand, and the farmer, finding a little leisure after the labors of the day, looks about him for some means of pleasure and amusement wherewith to occupy the time. He will find no more profitable way to spend an occasional evening than in the meetings of a wide-awake Farmers' Club. Better by far is it than to doze the time away, smoking a pipe in the chimney corner, or lounging at the country store. The book and the paper tire after a while; these organizations come in to occupy a portion of time in just such a way as the hard-working farmer needs. Here he can in a measure obtain that

Mental Culture

Which is so much neglected by those who labor day after day upon their farms. It is very natural for them to slide into almost entire neglect of any intellectual effort, and unless they have something of a character in which they are particularly interested, and which pertains to the business in which they are daily engaged, any effort in that direction soon becomes laborious, and finally is discontinued altogether. All the time, they are inclined too much to physical exercise, while they neglect the exercise of the mind. Even at many of our County Fairs, the annual address, which once afforded a little mental stimulus, has been discontinued, and the time is occupied in a manner which does not, to say the least, draw out any mental effort.

Again, much of the farmer's time is spent alone, or in company with hired help not in any way remarkable for their intelligence, and the mind runs along in the old grooves with but little to excite it to activity. It becomes sluggish. Mind needs contact with mind to rub it into activity. The more we associate with other individuals, the more the mind is aroused; we think, we study. These Farmers' Clubs then, are just what is needed to draw the farmers together, and to give them an opportunity to bring their minds in contact. The exercises are such as pertain to their

every day affairs, and therefore such as they are more or less familiar with. While exercising the mind, they are reaping other advantages as well.

Practical Knowledge

Is acquired. However humble the individuals composing the Club, however ignorant in "book learning," however rough their exterior, if they are practical farmers each one knows something which will be an advantage to the others. Some rough and otherwise ignorant men are critical observers, and are possessed of a fund of practical knowledge, which, if it can be drawn out, will be of interest to all. All farmers need a share in their knowledge, but it is very difficult to obtain. They are not public talkers, and any effort made under the formalities of a public meeting would quite surely result in a failure. I have seen such men at farmers' conventions, after the meeting was dissolved, gather together in knots and talk over the subject under discussion in a manner which would have done honor to the lecturer himself. A Farmers' Club is the very best place to draw out the knowledge of such men, and at the same time it is a good place to draw out the knowledge of those who are accustomed to public speaking.

Associated Effort.

Another advantage of these organizations is in associated effort. This advantage will manifest itself in many ways. Great good will come from association alone without combining in any effort. When men come together and compare notes, as the saying is, when they talk over the work in which at the time they are engaged, when they compare the different crops raised with the yield of their neighbors, they are spurred up to effort and are led to inquiry. These comparisons, this inquiry, lead to thought, and through that to better cultivation and better crops. They will be encouraged in trying new experiments. They can also associate in procuring new and costly kinds of seeds, and in trying new implements to prove their value. In many cases the members of a Club have combined in purchasing thoroughbred animals for the improvement of their flocks and herds. Such efforts cannot be too highly commended. In one instance the results were so satisfactory, and the interest awakened was so great, that it resulted in one of the members purchasing the entire herd of one of the most celebrated Short-horn breeders in New England. When such results are being realized from these organizations, who will dare measure the influence they are destined to exert if properly conducted and earnestly supported?

Social Intercourse.

Farmers necessarily live at considerable distances from each other, and in consequence of this and their habits of steady labor, confine themselves too much to their own fields and firesides. They and their families need recreation, need pleasures, need something to counteract the effect of the constant labor in which they are engaged. The mechanic in the village or city has his mind frequently drawn away from his work by that which is going on around him, but the farmer, being differentl situated, finds nothing to break up the monotony unless he seeks for it elsewhere. It is quite probable that more work would be accomplished and a better tone of feeling be experienced, to say nothing of the more cheerful countenance which would be worn, if a half day each week were given to social intercourse with fellow farmers, instead of devoting six full days each week to unremitting labor. After a day spent pleasantly away from home, the labor is not so irksome—the laborer is happier. Allowing as much was not accomplished by giving a little time to relaxation, it should be borne in mind that food and raiment for the family, forage for the stock, and money for the bank, are not the only things worth striving for. We need happiness as well. But if a portion of this time be given to a wide awake farmers' club, ideas will be gained, practical knowledge acquired, which in time will bring about results far in excess of those which will be realized by the farmer who does not improve these opportunities.

The Exercises of the Club

Should be varied to suit the tastes of different members. Discussions upon familiar farm topics should generally be held each evening, and every member should take part in them. Do not depend upon professional talkers, who may know little of the subject about which they are talking, but give your own experience and your opinions drawn therefrom, as you would talk them to a neighbor sitting by your own fireside. Practical knowledge will thus be imparted, which all should seek for. Essays upon the subjects which are to be considered, may be prepared and read by those who have a taste for putting their thoughts in writing. It is a good practice to assign topics six months or a year before hand, so that those who are to prepare essays may have ample time to "read up" their subject, or to experiment upon it on their farms. In this way almost every member can, if he will, prepare a valuable paper. To fill up any spare time, extracts from books or papers, which are not accessible to all, may be read, and the ideas or recommendations discussed.—Z. A. GILBERT, *Androscoggin Co., Me., in Country Gentleman.*

—Moisture sometimes generates in a bee hive in winter, and runs down the sides to the entrance, where, coming in contact with cold air, it is frosen, filling up the space, and stopping ventilation. This matter should be looked to occasionally.

SPECIALTIES IN FARMING.

The business of agriculture should be an industry and not a speculation. The insane pursuit of specialties has long been a curse to American agriculture. A whole community runs wild upon hops, when selling at 50 cents per pound, and in two years they are scarcely worth the price of picking, and extravagance begotten of high expectations is forthwith followed by bankruptcy. Wheat brings $2 per bushel, and whole States become wheat fields, while every other interest languishes, until the bread crop becomes so abundant as to be fed to swine in preference to shipment for human food. The sheep, with wool at $1 per pound, holds high place in popular esteem, but is kicked from the pasture by every Randolph of the farm at the first indication of a heavy decline in the value of its fleece. In your section cotton, a great boon to your agriculture as a constituent in your aggregate of production, may become an unmitigated evil if left to usurp the place of all other crops. The crop of last year produced $100,000,000, more than 50 per cent larger than ten years ago. Three millions of bales may command a profit of $40 per bale, while 5,000,000 may not bring a dollar above their cost. But present profit is not the main consideration. The increase in value and enlargement of the productive capacity of the soil, by a judicious rotation, including the restorative influences of green cropping and cattle feeding, is an increase of capital, a source of large annual income, and an addition to the inheritance of one's children. It not only insures a profit from cotten culture, but enables the planter to pocket the entire proceeds of its sale, other products feeding man and beast.—*Hon. H. Capron, at Georgia Fair.*

DOMESTIC HABITS.

It has been truly said that many a man has owed his success or failnre in business as much to the management of his wife, as to his own individual action. Although domestic occupations do not hold the high rank to which they are justly entitled, yet there is reason to believe that the sentiment which has so long prevailed is undergoing a radical change, and that females see more and more the necessity of possessing the ability to overlook and systematically direct the expenditure of that part of their husband's income which comes more directly under their immediate inpection: and truly we should consider them the more praiseworthy and deserving our esteem, whatever their circumstances in life, who best perform the duties which their situation requires. We believe that at the present time the instances are more common than at any time since the early settlement of our country where ladies in the higher classes of society consider it no disparagement to be familiarly acquainted with all the internal concerns of their families. Yet to the shame of many mothers be it said, that they suffer their daughters to grow up without any practical knowledge of housekeeping, and utterly unprepared to fill any situation in life with usefulness and dignity. They are all instructed in music and drawing, and all the ornamental, but not in the useful arts of life; and the result will continue to be as ever it has been in such cases where there is no security for the possession of wealth, that many a woman reared in luxury will by some reverse of fortune be compelled to exchange her home of ease and luxury for one of privation and care, and compelled to perform the lowest drudgery in order to obtain a small pittance with which to eke out a miserable existence.

AGRICULTURAL ITEMS.

—The Michigan *Farmer* says, we know of an English gardener who would never allow any rubbish to be burnt, but had it thrown into heaps to rot. It is astonishing, if left to time, how quickly that agent will perform the work of decaying trash.

—It is said that California, that land of wonders, is peculiarly adapted to the cultivation of cotton, that the soil and climate are remarkably suited to it, that the country is free from the chief difficulties and embarrassments that often make it a failure elsewhere; the season is uniform, and there are no worms, no inopportune rains, and no early frosts.

—The Kansas Agricultural College is now fairly under way, with thirty-four under graduates and 138 in the scientific and preparatory departments. Its endowment comes from the 90,000 acres of land located under the Congressional act of July, 1862. About one-half of this land has already been sold, creating a fund of nearly $180,000, which will this year yield an income of $16,000.

—For the improvement of pastures the *Ohio Farmer* recommends that they be divided, one-half stocked with sheep, and the other half with cows, and alternate changes made every spring; or by an entire change from cows to sheep and from sheep to cows every few years, always retaining a cow or two for family use. The two, however, never to run together.

—The Michigan *Farmer* says, if you build a square crib of poles notched, log-house fashion, say eight feet square, or larger or smaller, as you like it, and throw into it all sorts of trash—a little muck, leaves, bits of everything from the house, the sweepings, &c., and have it so that the kitchen slops and soap suds may be conveyed upon it by a wooden conductor, which a boy may make, you will, in the course of a year, have accumulated some ten dollars worth of manure—perhaps more—and have things tidier about the house and yard, and will continue the practice for profit and comfort.

[Entered according to Act of Congress, in the year 1870, by R. P. EATON & CO., in the Clerk's Office of the District Court for the District of Massachusetts.]

RURAL ARCHITECTURE.

BY GEO. E. HARNEY, Cold Spring, N. Y.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

No. 6.---A DOUBLE OR SINGLE HOUSE.

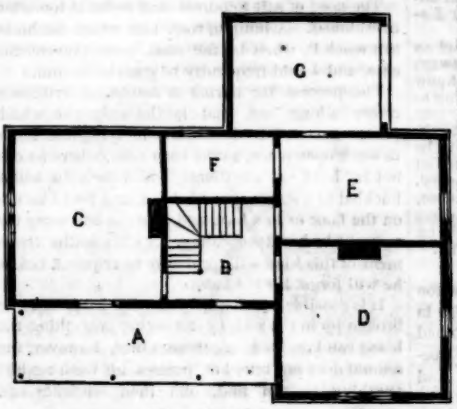
In continuation of our new series of plans for moderate priced houses, suited either for suburban or country residences, we present the above design. Our readers can but admire the faithfulness with which the engraver has brought out the ideas of the artist, and produced a charming realization of many a one's dream of a cozy little home.

This design represents an economical house for a single family, which, however, may be conveniently arranged for two families. In the design for one family, A is a veranda shielding the entrance. B is the entrance hall containing the staircase, and C the parlor, fourteen feet by sixteen; D will be the living room also fourteen by sixteen, and E may be used as a kitchen. It communicates with G, a large wood-shed. F is a large store-room opening from the kitchen also. In the second story are three good sized rooms, beside a small room over the store-room.

The house is designed to be built of wood, the frame being of spruce, boarded and clapboarded, and the roof boarded with hemlock boards and shingled with sawed cedar shingles, a portion of which may have lower edges cut

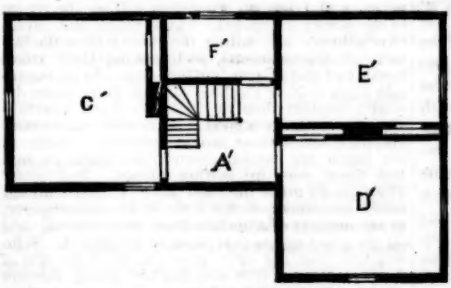
in the hexagon or octagon pattern. The outside may be painted and sanded. The cost would be about $2600.

We will soon give the plans by which this



Plan of First Floor.

house, by a slight variation of the inner partitions, can be made quite convenient for two small families. It will be understood with this, as with all other plans which we publish, that the estimated cost is what would be the expense of building in or near a city, where the builder had every thing to buy and full prices to pay for labor. Where a man can furnish lumber, or other material himself, and is carpenter or mason enough to do a portion of the work with his own hands, the expense will be correspondingly reduced.



Plan of Second Floor.

THE FOOT AND MOUTH DISEASE.

This disease, which, though not generally directly fatal, often produces death by secondary action or its influence on other morbid symptoms, has, during the past year, caused great anxiety and loss of property in Great Britain and on the Continent. It has unfortunately made its appearance in this country, and farmers everywhere, more particularly upon the lines of through cattle traffic, should be on their guard, and upon the first indication of disease showing any of its symptoms, immediate information should be given to the proper authorities, that measures may be at once taken to prevent its spread. The disease is highly contagious, not only by contact with diseased animals, but also by contact with the discharges from the sores, and the contagion may be conveyed by the matter adhering to the clothes (especially the shoes) of persons attending diseased animals, and also by the matter in the dung and litter of animals; on which account there is special danger from the manure or dirt thrown out of cattle cars at stations or in motion. The disease is also readily and frequently (perhaps most frequently) communicated by the discharges dropped upon the highways by sick cattle driven over them, and for this reason the first precaution to be taken is to prevent the moving of cattle attacked by the disease. The disease sometimes affects the udders of cows, and during its course (whether symptoms of its affecting the udder or not appear) the milk should not be used as human food or given to any animals.

The disease is spreading to an alarming extent in some parts of New York and in Connecticut. Over one thousand cases are reported in Dutchess county, and in Queens county on Long Island it has made its appearance among the cows kept for furnishing milk for New York city. We believe, however, by prudent and active measures, it may be controlled, and think no groundless fears should possess the minds of our farmers. We have great faith in the sulphurous fumigation alluded to by Mr. Goodale last week, and we hope our readers will not forget the remedy.—*Maine Farmer.*

MUSTY OATS.—A South Carolina correspondent, after reporting the loss of a horse, supposed to result from eating musty oats, says:—"I am certain more horses die in the South from eating damaged oats than from all other causes. As the oats are cut rather green, and often with many green weeds among them, it is very difficult to keep them from molding more or less in the centre. Many animals die from this cause, which are supposed to have had blind staggers, as in the case of mine. Another horse died recently near me in the same way, after being fed on oats mostly sound, but some of the bundles musty in the middle."—*Md. Farmer.*

EXTRACTS AND REPLIES.

A CRIBBING HORSE.

Having a cribbing horse and wishing to gain all the information I can on the cause and cure, if there is any, it would oblige me if you would answer a few questions upon the subject in your *Extracts and Replies*.

A friend told me a few days ago that he met an Agent of the NEW ENGLAND FARMER in Medway, who, upon seeing a horse crib, said that he knew the cause and cure; he said that it was owing to the teeth being too tight, and that the remedy was to take a fine saw and saw between the teeth. What I wish to inquire is, do you think this to be the real cause and cure? I have never heard of this before; is it a new idea or is it an old theory. It is my opinion, founded upon some experience, that it is not caused by the teeth. I think it arises from some hankering in the stomach brought on by some inflammation or disease. L. A. COBB.

Sheldonville, Mass., Dec., 1870.

REMARKS.—We doubt whether any person knows, precisely, what causes horses to indulge in cribbing. Was it ever known in a colt who had run in a pasture in the summer and had the freedom of a yard in the winter? We think not. And if not, then it is natural to suppose that it must be something that relates to the management of the animal in the feeding, working, or some peculiarity in the stall or stable. The largest number of cribbers are found among horses that are not regularly worked; one that is doomed to pass many weary days and weeks of stagnation in the stall. This may be the cause, and probably is, sometimes. Horses in health should never stand a week at a time without exercise. If the owner has no use for the animal, he should give him the run of a small pasture or a large barn-yard, or a drive with some person on his back or attached to a carriage, for the sake of the exercise itself.

If long confined to the stall, and fed liberally, he gets full of energy, and failing to find any other means of working it off, sometimes falls to kicking, knocking the planks of the stalls to pieces, or the boarding flies off in splinters from the side of the barn. Another horse, in his restlessness, will bite at anything he can lay hold of, and finding that he can stretch his muscles a little by holding on with his teeth to the crib, tries it again and again until habit becomes almost immovably fixed. He enjoys it. It affords him exercise and he grunts his approbation of it every time he stretches back with his teeth fast to the crib. A good horse loves action, as much as does an ambitious man. When properly fed, loaded and driven, he finds enjoyment in work, and no creature is more faithful in it. Is it strange that *idleness* should beget a bad habit in a horse, when we consider who it is that usually employs an idle man!

Idleness with high feeding we should think a sufficient cause of cribbing. Too much sameness in the diet may disarrange the digestion, and lead to a restless habit that induces cribbing. Or, close and tainted air in the stables may lead to it. All these are theories, but we doubt whether a horse never subjected to any of these things will ever become a "cribber."

Horses occupying stalls near cribbers are quite apt to contract the habit, and, therefore, should not be allowed near them.

The need of salt to horses and swine is too often overlooked. A lump of rock salt where the horse can reach it, when in the stall, may prevent disease, and would frequently be grateful to him.

The process for curing a confirmed cribber is rather a long one, and is the only one which proves successful. It consists in tying the horse in some open place, as the barn floor, where he can not lay hold of anything. Tie him by a halter buckled to a staple over his head, and feed him upon the floor or in a box, and take the box away the moment he has done eating. A six months' treatment of this kind will probably be required before he will forget his old habit.

It is possible, perhaps, that the habit may be broken up in the stall by removing everything the horse can lay hold of. Sometimes, however, the animal does not bite, but presses his teeth against anything he can find, and then stretches and grunts.

WHY FARMS ARE CHEAP IN WESTERN MASSACHUSETTS.

I find a few leisure moments and think I will improve them by giving a few reasons why Massachusetts farms are bought and sold so low. Your correspondent, "W. E. A." asked, are they bonded to railroads? Many of them are. Yes, I may say all are, and many double bonded. I reside some twelve miles from railroad, and the centre of the town is about the same distance from one, making us a border town. I think I may say this town is not bonded to any particular railroad company, and yet I call the town bonded. In Vermont, they have no Hoosac Tunnel, where millions of dollars of public money are being thrown away,—saying nothing of many lives that are being sacrificed. I say thrown away, for this generation will never see the earnings of the road meet one-half the expense, and I fear no generation will see the return of the money expended. These extra and lavish expenditures are calling the money from the farmers of Massachusetts, and making their yokes heavy and their farms burthensome. In no mountain town in New England can you find a more desirable location than in this. We have beautiful scenery, naturally a good soil, pure air, pure water, and pure temperance people generally. Many of the farms are handed down from father to son. But these sons are getting uneasy. And why? They cannot make the farm pay! Heavy railroad taxes, insurance policies, both on life and property, to say nothing of a multitude of book agents, and all the other agents that must be patronized. Who wonders that the cities grow fat, while the ribs of the poor country crop out, and the young farmers offer their farms at low figures. The present prices of farms in this place average only about fifteen dollars per acre. W. F. JONES.

Worthington, Mass., Dec. 23, 1870.

REMARKS.—At the risk of being considered old-fogyish, we confess that we sympathize with the views of our correspondent. Divide the sum of the public indebtedness of Massachusetts—State, county, town and society, without including our national debt,—among the voters of the State, and

we think the result would show a fearful indebtedness. Taxes have increased rapidly within a few years; but, high as they are, they afford no just measure of our financial extravagance, as they fall far short of meeting our annual expenditures. The annual interest on the town or city debt alone of many municipalities represents a larger sum than was raised on the grand list of those towns or cities not a great many years ago. Little leaks sink great ships, and we believe that premiums on life and property insurance are draining from country towns an amount of money that would surprise us if the sum total could be ascertained. Who will give us the figures?

VINEGAR EELS.

MESSRS. EDITORS:—Some of you did up the explanations on the "hair snake" question, in a late number of the FARMER, rather neatly. But didn't you make one rather broad statement? Thus:—"These curious worms, *like all other animated beings are produced after their kind.*" Three or four years ago, I took some new cider and put a small quantity into a new pine "keeler" and set it up on a shelf in my kitchen. In the course of a few weeks it had changed to *first-rate* vinegar, but it was full of little eels. I could see them with the naked eye, and there appeared to be millions of them. They were certainly "animate" beings, but how could they be produced "after their kind?" I certainly know that new cider, white pine, and air, were all the visible materials that entered into their production. I wish you would clear up this mystery as neatly as you did that in relation to the hair snakes, for it has bothered me much.

EDWIN GUILD.

Walpole, N. H., Dec. 17, 1870.

REMARKS.—When one begins with compliments or flattery we generally expect he will end with something a little different, perhaps with a "poser," and we are at once put on our guard. So, taking refuge behind a pile of books we repeat our belief that every "animate being," even the vinegar eel, is produced "after his kind." Of course we shall not here enter into a discussion of the question of spontaneous generation. We prefer for once to dogmatize, and using the language of one of our books, say that this doctrine "has now no place in physiology," as the most learned men rest their belief in the simple truth so early announced, that "every living creature that moveth," is produced "after his kind."

The vinegar in which you found the eels was made of cider. Cider is water in which the vegetable matter of the apple is decaying or undergoing transformations. Now the books say,—we quote from the American Cyclopædia:—

"If a drop of water in which animal or vegetable matter is decaying, be placed upon the object-holder of a powerful microscope, it will be found to swarm with living beings in active and incessant motion. They vary in size from the one-hundreth of an inch, when they are just within the limits of unassisted vision, to a minuteness which it tasks the power of the glass to detect. These are infusoria; they abound in every ditch, pond, lake, or river; are equally numerous in salt as in fresh water; have been found in hot springs, and in the melted snow of the Alps; in short, wherever water and decaying vegetable or animal matter exists these infusorial animals will be found in vast myriads. There is no doubt that they are often drawn up into the atmosphere in watery vapor, and borne to and fro by the winds. Many forms are not deprived of life by complete desiccation, (thorough drying) and may therefore be mingled with dust, and in this condition carried about by the winds, to resume their active vitality so soon as they chance to fall into water favorable to their existence."

If the foregoing statement is reliable you will see that "new cider, white pine and air" furnish all the necessary conditions of compliance with the command to "bring forth abundantly;" and, also, how it is possible that the eels in your vinegar might claim descent in regular order from Mediæval ancestry. The microscope is a modern invention or discovery, and medical and other scientific men are making great use of it of late. It has demonstrated that there are microscopic plants as well as microscopic animals, and that the plant as well as the animal is produced "after its kind" with as much exactness and certainty as "great oaks from little acorns grow." The seeds of these microscopic plants float in the air, and are called "spores." It is supposed that they produce rust on grain, and fever and ague and other diseases in the human system, by their growth on straw and in the blood.

WHAT AILS THE CREAM?

Our butter has come as well as could be expected until the two last churnings, when I think we churned nearly half a day each time. The cream was not over seven days old; had been kept in a warm buttery, and well stirred at each skimming. We put in salt, hot water, and lastly butter, to make it come at all. Now do please some of the readers of the FARMER, or editor, let a fellow know if there is any way to make it come in a proper length of time. As this is my first attempt in the writing line, the editor will please correct any mistakes.

East Burke, Vt., Dec. 14, 1870. S.

REMARKS.—We have made more or less butter for some twenty-five years, between November and May, and have rarely had any trouble in churning or otherwise, during that time. The first thing is to have good cows and *clean* milk. The milk and the cream is kept at a temperature of about 60°. The cream is taken off in from 36 to 40 hours. A little salt is put into the pot as often as cream is added and the whole stirred. Churn often; say once a week, or oftener if sufficient for six or eight pounds. In churning, have cream, churn, dasher, &c., of a temperature of about 62°. Churn steadily and moderately, and expect butter in twenty-five minutes.

These rules have been stated with greater particularity so often, that on the receipt of your letter we thought we would try your questions on Mr. O. S. Bliss, Secretary of the Vermont Dairyman's Association, and a gentleman who has made butter-making a specialty. The following is his answer. You will see that if he is correct in his idea of the cause of the trouble with your cream, the fault is at the barn and not in the buttery; with the man, not with the dairywoman, on whose shoulders the

blame for poor butter is too often heaped by masculine hands. Mr. Bliss says:—

"This is a very common case, and is generally attributed to not salting the cows at proper intervals. It is barely possible that the salt, or the want of it, may have some remote connection with the matter; but after thoroughly investigating innumerable cases of the kind, we are led to the conclusion that the cause is fundamental.

"We never knew a case during the season of flush feed, when all the little sacs or globules of cream were 'bursting with very fatness;' but they invariably occur in seasons of short or very poor feed, or in the fall when a cart load of the frosted and bleached 'old fog' upon which the cows are forced to live, does not contain enough fatty matter to make a pound of butter, or in the winter when the cows are confined to late-cut or poor hay or straw.

"The only means of 'fetching the butter' under the circumstances, is to scald the cream and cool it down to about 60°, when it may generally be churned without undue labor. The quality of the butter is at best but poor, and probably none the better for the scalding. It is a fact well understood by experimenters, that the most complete separation of the butter may be effected by heat; but that the evaporation of the more desirable flavor follows as a necessary consequence.

"*The great secret of making good butter, and having it 'come' easily, is in an abundance of rich feed.*"

TOP DRESSING.—PLOUGHING MANURE UNDER.

I read with much interest the communication in the FARMER of December 17, signed "C.," Wilmington, Vt. The application of manure is a subject too little discussed in our agricultural papers. Manure is the basis of all good farming in the New England States. With a good stock of manure managed in the best manner, farming is rather up hill business at the present time; but without it farming don't pay at all. I think farmers should study to get the greatest amount of benefit from what they have, and also to make all they can.

My experience has been very different from that of Mr. C. I have applied it always and in all forms, and on almost all varieties of soils, and think there is no way by which I can get so much benefit as by ploughing it in, after having been spread on to grass land. It should be turned under not very deep, say five inches.

Mr. C. wants to know when manure leaves the soil, and asks does it go up or down? I think portions of it go both ways, until retained by the soil. I am thinking but little of it leaves the soil any way if it is put where it ought to be until it is taken out in some kind of a crop. Does Mr. C. think the ammonia and the gases which arise in stirring a manure heap that has been under cover would not enrich the soil if they could be made to pass through three to five inches of earth? I stir my manure as little as possible until I get it covered up, and I am one of those men that Mr. C. speaks of who keep their teams with the plough pretty close to the men who spread the manure, for I think that all the gases that rise are floated away by the winds until some shower carries it into the soil, perhaps miles away from my field.

I do, however, top dress some on land that is too wet to plough, but I do not think I get near the full value of my manure thus applied. I have top dressed with twenty-five ox-cart loads to the acre, and got good grass about two years; but by the third year the grass would not be much better than it was before the top dressing was put on. I have also put the same amount on the same land and ploughed it in, and with a little in the hill, have got 125 bushel of ears of corn at husking time; a crop of oats the next year of from fifty to sixty-five bushels, and then with a good catch, I would have four good crops of grass, making in all six crops, or rather eight, as I mow twice a year the two first years,—all the crops together probably varying from twelve to fourteen tons from one acre. Such is my experience in top dressing and in ploughing in the manure. C. F. LINCOLN.

Woodstock, Vt., Dec., 1870.

SUPPLY OF WATER FOR STOCK.

The question to be solved by farmers just now is, how shall we provide water for our domestic animals? Many wells that have furnished an abundance of water for family use through the drought of the past summer, now fail to yield a supply for man and beast. Running water was formerly considered a luxury, to be enjoyed only by the favored ones; but it is now regarded as a necessity on every well regulated farm. Many farmers who could not find springs with sufficient head, have put in hydraulic rams the past autumn, and others are contemplating similar improvements. Those only who are deprived of the advantages of good watering places on their farms can fully appreciate the privilege they confer, the amount of suffering they prevent and the labor they save. After one has dealt out to stock once or twice a day from a well all the water they get during the day, for a few weeks, he will value as never before a flowing stream. It is surprising how little attention is given to this subject of water, when so much is depending upon it, and when so little expense as would in most cases be necessary to provide a remedy for the evil. Wells may be resorted to when nothing better can be provided; but experience proves that running water, such as is furnished by springs or streams, and which can be conducted to the points where it is most wanted, is not only the best for stock but far the most economical in the end. There are but few farms on which water works of this kind may not be constructed, and the water conveyed in pipes wherever desired, and nothing but a little energy and skill would be required to bring an abundant supply of pure spring water to the farmers' door, to his stock yard and sheep-fold.

THE TOBACCO CROP.

A portion of the tobacco crop has been taken from the poles and is being stripped and prepared for boxing. It has cured in good shape, and the quality compares favorably with the best crops of previous years. Sales during the week have been 20 and 25 cents for new, and 31 cents per pound for old. The weather has been favorable for stock and the price of fodder is not any higher than it was in November. W.

Sunderland, Mass., Dec. 23, 1870.

SAND INSTEAD OF STRAW.—J. S. Ives, of Salem, Mass., writes as follows to the *Country Gentleman*: You are correct in the assertion, that Massachusetts farmers advocate the use of *sand* as an absorbent in bedding cattle. I have used it more or less for the past fifteen years, and consider the manure much improved, as the sand retains the urine much better than hay or straw. Fresh sand I think equally as good as that taken from the sea shore. Cattle should be bedded three inches deep. We also consider it very advantageous to the health of cattle. Farmers in our vicinity collect it in August and store in a dry shed. By winter it will become dry, and will not freeze in the coldest weather.

THE MIGRATION OF BIRDS.

LISTENING to the loud "*honk*," *honk*," of a large number of wild geese on the third of December, led the mind to a contemplation of the wonderful works of an Almighty hand every where about us. They were high on the wing, safe from shot or bullet, were flying directly west, and their slow and heavy motion and loud cries indicated a long flight and fatigue. The weather was cloudy and the air damp and heavy, so that, being long on the wing in it, they may have become encumbered with too much moisture; or, they may have passed through regions of damp, falling snow, and become so loaded with it as greatly to obstruct their passage. We were on high land, and pruning in the top of a tree, which afforded an extensive view of them as they went by. Just at night, and especially in heavy weather, their notes are quite different from those which they utter in clear weather, or earlier in the day. When apparently fatigued their "*honk*," or "*hawk*," seems more guttural and prolonged, than the sharp, quick cry uttered in clear weather.

The contrast between these denizens of the upper air, and the chattering little chickadee, hopping from branch to branch on the tree where we were, and taking insects so minute as scarcely to be discernible, could not fail to excite emotions of wonder and delight. This tiny thing, whose whole weight would scarcely exceed a couple of ounces, defying heat and cold, passes the winter in all parts of New England, uttering his cheerful chick-a-dee notes among shrubbery and in the branches of trees, where coldest winds are blowing or the air is thick with falling snow. He is proof against the vicissitudes of our winter climate, we know, but still our reflections give rise to the beautiful feelings expressed by Burns:—

"Ilk happing bird, wee, helpless thing,
Which, in the merry months of spring,
Delighted me to hear thee sing,
What comes o' thee?
Where wilt thou cow'r thy chittering wing
And close thy e'e?"

Why do birds emigrate? Swallows and martins leave us, it would seem, when their food is more abundant than ever; when the air is swarming with insects, and when their young are frequently not sufficiently grown to take long flights to distant lands; and yet they evince great impatience at the delay, gathering themselves into chattering conventions, sweeping the air in wide circles, darting away in a southerly direction for a brief time, and then returning and alighting in unusual places. Then they urge their young to take wing, pushing them from their boxes or the eaves of the barn, until they gain confidence, when with great apparent confusion, they suddenly dart away and are seen no more!

Many have attempted to account for such early migration among birds, but have reached no really satisfactory results. It cannot be want of nourishment, because there is still abundance in the places they are leaving. "Atmospherical currents are not the cause, nor do the changes of season explain it, as the greatest number set off while the weather is yet fine; and others, as the larks, arrive while the season is bad." The latter we have seen in February, while the earth was deeply covered with snow. Atmospherical influences can only hasten the migration in autumn, but must retard or derange it in spring. "It is the *presentiment*, says M. Brehm, of what is to happen, which determines birds to begin their journey. It is an instinct which urges them, and which initiates them into the meteoric changes that are preparing. They have a particular faculty of foreseeing the rigors of the coming season; an exquisite sensibility to the perception of atmospheric changes which are not arrived, but are approaching." The immortal Newton ascribes this sensibility to "nothing else than the wisdom and skill of a powerful and ever-living agent."

The mode of migration differs in different species, some assembling in large flocks, and taking their flight together, such as swallows, geese and ducks, while others seem to prefer taking their solitary way. The charming little *Bobolink*, which visits nearly every rural homestead in New England, towards the last of May, commences its flight south about the middle of August. On the shores of the Delaware, Potomac and other large rivers,

they feed on the wild rice, and are called Rice or Reed Birds, and when that begins to fail, they swarm the rice fields in the Southern States, and soon appear in the islands of Cuba and Jamaica, where they feed on the seeds of the Guinea-grass. But one would scarcely recognize our charming little friends down there. The males have lost their gay nuptial livery, and appear in the sombre colors of the females. They have also lost their jingling melody, with which they regaled us here, and only utter a sharp *'weet, 'weet*, as they pass from us in flocks or in small numbers.

It is a matter of history, that a falcon belonging to Henry IV. of France, having escaped from Fontainbleau, was found, at the end of twenty-four hours at Malta, a distance of about 1,350 miles! In 1833, a Polish gentleman having found a stork upon his estate, near Lemberg, put round its neck an iron collar, with this inscription, "*Hæc ciconia ex Polonia*, (this stork comes from Poland,) and set it at liberty. In 1834, the bird returned to the same spot, and was caught by the same person. It had acquired a new collar of gold, with the inscription, "*India cum donis remittit ciconiam Polonis*"—(India sends back the stork to the Poles with gifts.)

Although a large portion of our summer birds leave us as autumn approaches, we are not left entirely alone in the winter. Birds come to us from regions farther north. A few years since we saw strange birds among the shrubs in pastures, but quite near thick forests, early in January. A few weeks later many of the same kind daily visited a row of large apple trees, and soon covered the snow under them with the husks of the buds; taking the inside of the buds as a reward for their labor! Of course, the trees bore no fruit the succeeding summer. This bird proved to be the *Pine Bunting*, of Canada, and the regions beyond.

Our little Blue-bird, among the first harbingers of spring, passes and repasses annually in great numbers, from the mainland to the Bermudas, a distance of not less than six hundred miles without any intervening land! What power of wing must the little creature possess, to sustain itself in that long flight, without an opportunity to rest!

This subject would afford an instructive and delightful winter evening's entertainment to those who have not yet read up on it.

THE CATTLE DISEASE.

The Board of Commissioners on Contagious Diseases among Cattle, of Massachusetts, consisting of Hon. Levi Stockbridge, H. W. Jordan, Esq., and Dr. E. F. Thayer, have issued the following circular to the city and town authorities of the State:—

The undersigned, Commissioners on Contagious Diseases among Cattle, call the attention of the Mayors and Aldermen of cities, and the Selectmen of towns, to the fact that a highly contagious disease, known as Epizootic Aphtha, or Foot and Mouth Disease, has broken out in this State, and is rapidly spreading among the cattle of very many of our towns. The disease is not of such an alarming and fatal character as the pleuro-pneumonia, yet, by its ravages, there is great danger that it will inflict immense losses on our cattle owners, and possibly to some extent injure the health of our people. The disease is communicated by the contact of healthy with the sick animals, by all inanimate things that have become contaminated, and by yarding healthy cattle on the same land, or driving them on roads previously trodden by those diseased. The cattle yards of Brighton are apparently contaminated with the virus of the disease, and animals driven thence carry and communicate it wherever they go. In view of these facts, and, if possible, that the contagion may be eradicated from the Commonwealth, we would most earnestly recommend that you, in each municipality, perform your duty as defined in Chapter 220 of the Acts of 1860, by interdicting all driving of cattle to, from, or within your respective limits (see Section 5 of said Act,) and by a most thorough and radical purification of the yards and buildings which have been contaminated by it. The Commissioners will, at the same time, make regulations to prevent any further importation of it from abroad. Notwithstanding the great extent to which the disease has already insidiously spread, we entertain the hope that, by the united energetic action of the authorities, and the co-operation of our people, this disease may be squelched, and the losses it has inflicted on the stock-growing regions of Europe be averted.

Notice to Cattle Drovers, Dealers, and all Persons Interested in the Traffic of Cattle.

In consequence of the prevalence of Epizootic Aphtha, or Foot and Mouth Disease, the Commissioners on Contagious Diseases among Cattle hereby prohibit the driving or transporting, to or from Brighton, Cambridge, or the Cattle Yards at the Medford Railroad Station, until further notice, all Cows, Store Cattle, and Working Oxen.

The Selectmen of Brighton and Medford, and the Mayor of the City of Cambridge, are directed to enforce the above order.

The municipal authorities of the several towns and cities in the Commonwealth are requested to co-operate in making the above order effectual.

As the disease is very contagious, the complete separation of such animals as have been exposed, or which it is feared have the disease, is of first importance. This commission of which Dr. Thayer, an experienced veterinary Surgeon, is a member, advise the following treatment:—

1st. The animals to be kept in a comfortable, dry place.

2d. A solution of alum, one lb. to three

gallons of water; the mouth to be washed with it daily.

3d. A solution of sulphate of copper (blue vitriol,) one lb. to two gallons of water; to be applied to the sores on the feet.

In this connection we re-publish from the FARMER of Dec. 24, the substance of what Dr. Law said at the meeting at Framingham.

The disease was a kind of eruptive fever, the symptoms being a hot mouth, costiveness, lameness, tightness of the skin, or "hide-bound," in the farmer's phase. After the first symptoms blisters appear in the mouth and on the teats and in the parting of the hoofs. These degenerate into ulcers which are liable, though not certain, to result in permanent injuries, especially to the feet and udder. In some cases the hoofs have come entirely off. The animal refuses its food, apparently from soreness of the mouth rather than entire loss of appetite. The milk becomes diseased and unwholesome, and when drank by man or other animals produces a similar state of disease in them. In some cases it has proved fatal to children, and swine and dogs have both been badly affected by the virus. It appears to originate in most cases in the hoof of animals, and is not contagious through the air. It continues through a period of fifteen or twenty days. No immediate cure can be expected, but the isolation of the diseased animals was the first thing to be done.

The Professor recommended treatment as follows:—

Wash the mouth with vinegar or some cooling liquid, such as a dilution of carbolic acid, one part of acid to one hundred and fifty of water; and for the teats, a wash of one part of carbolic acid to one hundred and fifty of glycerine may be used. The hoof should be cleaned and the space between parting of the hoof cleared of detached scarf, skin and horn by drawing a strong rag roughly through it. Then apply to the raw surface pure carbolic acid, and bind with a rag covered with tar, tied between the hoofs and around the pastern.

As the inability of the animal to eat results from soreness of the mouth rather than loss of appetite, good nursing is of much importance. Soft food, such as boiled corn, Indian meal gruel, &c., should be given to preserve the strength of the animal. In bad cases it may be poured down from a bottle.

CONSTITUTION FOR FARMERS' CLUB.

As inquiries are often made for an outline of organization, we copy the following form of constitution and by-laws for a farmers' club, from the *Ontario Farmer;* forms which the editor says are in use by an existing Farmers' Club. Of course it may be varied to suit the circumstances or wishes of the members of any association which may adopt it.

Constitution.

I. This organization shall be known as the ——— Farmers' Club.

II. Its object shall be the improvement of its members in the theory and practice of agriculture, and the dissemination of knowledge relative to rural and household affairs.

III. Its members shall consist of such persons as shall sign the constitution and by-laws, and pay annually the sum of ———

IV. Its officers shall consist of a President, (two) Vice-Presidents, Secretary and Treasurer, who shall jointly constitute the Executive Committee, and shall be elected annually.

V. Its meetings shall be held weekly, fortnightly or monthly as the case may be, at such places as may be designated by the Club.

VI. This constitution may be amended at any regular meeting by a majority of the members present, said amendment having been proposed at the previous meeting.

By-Laws.

I. The President shall preside at all meetings of the Club and Executive Committee, and have power to call special meetings.

II. One of the Vice-Presidents shall perform the duties of the President during his absence.

III. The Secretary shall record the proceedings of the Club and conduct its correspondence.

IV. The Treasurer shall receive all moneys, and pay the same on the written order of the President, countersigned by the Secretary.

COTSWOLD SHEEP.

A somewhat detailed account of the breeding of the flocks and the management of the farms on the Cotswold Hills in England, where this breed of sheep originated, is furnished to the *Western Rural* by William H. Sotham, a native, we belive, of that section.

Farmers there divide their land into seven fields, and practice what is called the seven-field system of rotation. That is, take a given field, and beginning with,

1. Turnip fallow,
2. Barley,
3. Clover and rye-gross, mowed,
4. Clover and rye-grass, pastured,
5. Wheat,
6. Vetches,
7. Oats, and then turnips, &c., again.

Consequently each field produces each of these crops once in seven years. The turnips and the vetches are fed off by sheep, in rations, by "hurdles," or movable fences on the ground where they grow.

Mr. S. says that an acre of the light land of the Cotswold hills will bear a ewe and her offspring, under this system of farming and rotation of crops. Few farmers there keep less than 150 ewes to breed from; many, more than double that number. This 150 ewes bring as many lambs, and frequently twenty more, for many bring two; still there is an allowance to be made for barrenness, escapes, and deaths. This gives 150 ewes, 150 tegs, and 150 lambs, on 150 acres of land.

In respect to the common idea in this country that Cotswold sheep will not do well in

large flocks, he says, "there are breeders on the Cotswold hills, who breed from a thousand ewes, following the same rotation, only more extended. Now, tell me why Cotswolds cannot be kept in large flocks. I have seen from 700 to 1000 in one field of thirty acres, but they were in separate flocks."

In this country few farmers have adopted any such systematic course of rotation as that practiced in England. Nor are farmers here in the habit of fencing off small patches of any thing they raise as food for sheep, by which we suppose they would virtually be kept in small lots. Indeed, Mr. S. says that the 1000 sheep that he has seen on thirty acres were in "separate lots." May it not therefore be possible that while Cotswold sheep may do well in large flocks in England, as they are managed and fed there, they will not do well in large lots here, as American farmers treat sheep?

SOUTH CAROLINA.—A correspondent of the *Rural Carolinian* says that the Agricultural Society of that State dates its beginning in 1784, and that it was regularly organized August 24th, 1785, by the election of Thomas Heyward, one of the signers of the Declaration of Independence, as President, and Thomas Pinckney, Vice President. Mr. Jefferson and other distinguished men of the country were enrolled as members. Many of them made communication with the view of furthering the objects of the Society, and it is an interesting fact that in 1786 Mr. Jefferson sent some seeds of a grass, found to be very useful in the South of Europe, in the hope that it would prove equally useful here. On the list of its anniversary orators are to be found the names of McDuffie, O'Neall, Poinsett, Hammond, Seabrook, Alston, King, W. Elliott, Calhoun, and others—all now departed.

HOW MUCH WORK A HORSE CAN DO.—At a meeting of the British Association at Dublin, Mr. Charles Bianconi, of Caspel, read a paper relative to his extensive car establishment, after which a gentleman stated that at Pickford's, the great English carrier's, they could not work a horse more than ten miles a day, and wished to hear Mr. Bianconi's opinion on the subject. Mr. B. stated he found by experience, he could better work a horse eight miles a day for six days in the week, than six miles a day for seven days. By not working on Sunday, he effected a saving of 12 per cent. Mr. Bianconi's opinion on this point is of the highest importance, for he has over 900 horses working sixty-seven conveyances, which daily travel 4244 miles. It is also the result of forty-three years' experience. —*Scientific American.*

From the Detroit Courier of 1831.

THE MICHIGAN EMIGRANT'S SONG.

Come all ye Yankee Farmers,
Who'd like to change your lot,
Who've spunk enough to travel
Beyond your native spot,
And leave behind the village
Where Pa' and Ma' do stay,
Come follow me and settle
In *Michigania*.

I've hearn of your *Penobscot*,
Way down in parts of *Maine*,
Where timber grows in plenty,
But darn the bit of grain;
And I have hearn of *Quoddy*,
And your *Piscataqua*,
But these can't hold a candle
To *Michigania*.

And you that talk of *Varmount*,
Why what a place is that?
Be sure the gals are pritty,
And cattle very fat;
But who among her mountains
'Mid clouds and snow would stay,
When he could buy a Prairie
In *Michigania*.

And there's your *Massachusetts*,
Once good enough, be sure;
But now she's always laying on
Taxation or manure;
She costs you pecks of trouble,
But de'il a peck can pay;
While all is scripture measure
In *Michigania*.

Then there's your land o' *Blue Laws*,
Where deacons cut the hair,
For fear your locks and tenets
Should not exactly square;
Where beer that works o' Sunday
A penalty must pay,
While all is free and easy,
In *Michigania*.

What country ever growed up
So great in little time,
Just popping from the nurs'ry
Right into like its prime:
When *Uncle Sam* did wean her,
'Twas but the other day,
And now she's quite a Lady,
This *Michigania*.

Upon the river *Clinton*,
Just thro' the country back,
You'll find in shire of *Oakland*
The town of *Pontiac*—
Which springing up o' sudden,
Scar'd wolves and bears away,
That us'd to rove about there,
In *Michigania*.

* * * * * *

Then come ye Yankee farmers,
Who've mettle hearts like me,
And elbow-grease in plenty,
To bow the forest tree;
Come take a 'Quarter Section,'
And I'll be bound you'll say,
This country takes the rag off,
This *Michigania*.

—During the year 1869, nineteen hundred patents upon agricultural subjects were issued from the United States Patent Office. The more prominent matters were classed as follows: ploughs and attachments to ploughs, 255; harvesters and attachments, 195; planters, 150; cultivators, 150; churns, 130; rakes, 90; seeding and sowing machines, 80; harrows and pulverizers, 80; bee-hives, 62; separators and smut machines, 50.

EXTRACTS AND REPLIES.

SUPPOSED CASES OF LUNG AND KIDNEY OR LIVER DISEASES IN PIGS.

Last February I had a litter of ten pigs. They did nicely for about ten days. I then saw that one of them was badly troubled in breathing. I think that if I should say that he breathed like a horse *badly* afflicted with the heaves, it would come nearer the case than any description I could give. There was a movement of the flanks similar to that of the horse, when badly afflicted with this disease. He seemed to be in considerable distress. He lived about forty-eight hours after I first saw him.

A few days afterwards another one seemed to be in the same condition, but not quite as bad. Soon after another and then another, and so on until all but four had the same trouble. They lived several days after they were taken, but none that showed any of these symptoms recovered. I kept them in a stable. From the time they were dropped, until within a day or two of the time that I noticed any trouble, it was very warm and pleasant. We then had a cold snap.

During the summer, I had two litters of pigs running together in my orchard. When they were about a fortnight old, (some of them a little older,) they commenced to turn black. They looked as if they had been stuck in the mud, and it had nicely dried upon the skin. There was no mud or water in their pen; nothing that they could get into to make them look as they did. They seemed to eat quite heartily, but instead of growing larger, they grew smaller. Several of them died and the rest of them recovered. I don't know as I ought to say that they recovered, for they have grown but little since. They have done the *meanest* of any pigs that I ever owned, and I keep a large stock of them.

I have heard of an instance similar; but no cure did the owner find after several trials.

During the latter part of their "blackness," I placed fresh water in their pen. They seemed to like to drink it; and if anything helped them, it was this. I am quite anxious for advice and information, as I fear that I may see the same trouble again. P.

Mirickville, Mass., Dec., 1870.

REMARKS.—We believe the pigs first mentioned, died of inflammation of the lungs,—*pneumonia*. This was caused by a sudden change in the weather from warm to cold; a very common cause of the same disease in the human species. If we had pigs similarly affected, we should put them in a warm place, feed them with warm milk and water—equal parts—and wash them thoroughly, two or three times a day, with warm water, and a little common salt in it.

The other pigs, probably, suffered from a disease of the liver; or, from an affection of two little bodies situated, one upon each kidney, and called, in anatomical language, *supra-renal capsules*. We judge by the symptoms mentioned, that the latter disease might have been the true one. The causes of such diseases are not well understood; and perhaps the owner of the pigs can form as correct conjectures in the matter, as we can. We know of no better treatment in such cases, than to give them the most nutritious food, and as much of it as can be put into them; keep them in a clean and well ventilated pen from which they can go at will into the open air; and wash them every day with clean warm water. Perhaps a little potash or soda in the water would improve it. We should have little confidence in internal remedies in this affection; but if we were to prescribe anything of that kind, it would be water impregnated with iron, or a solution of copperas—*sulphate of iron*.

FOULS OR FOOT-ROT IN CATTLE.

I noticed in the last FARMER a piece written by Otis T. Streeter, entitled foot-rot in cattle, and not being able to fall in with the cure that he prescribed, which was much like cutting off a cow's head to cure the horn ail, I thought I would communicate to you a little of my experience with that distemper.

In the year 1856, I was keeping a dairy of sixty cows, which grazed a very nice hill pasture. In the month of June, the foot-rot broke out in the flock, which I found to be a very severe disease. When a cow commenced being lame she would nearly dry up her milk on the best of feed, and be reduced in flesh very rapidly. I commenced doctoring in various ways, and with various medicines, such as alcohol, saltpetre, blue vitriol, spirits of turpentine, various kinds of painkillers, &c. Finally I commenced washing the sore feet with brine as strong as could be made of the best dairy salt, dissolved in boiling water. After washing twice each day for two or three successive days, in order to cleanse the sores thoroughly, I covered the sore thoroughly with pitch tar, and soon the sore would be well, and the cow come to her usual mess of milk again. The disease went nearly through my flock that season, before I found a means of checking its run, which I did by feeding saltpetre pulverized and mixed with salt, after the rate of about a teaspoonful to each cow once a week. I have been keeping a large dairy ever since; sometimes as many as one hundred cows, and have frequently had the same thing break out in my flock; and have always succeeded in curing and stopping the disease by using the saltpetre. As late as last summer it commenced in my flock of sixty, and with the above remedy I stopped it by having only four cases of sore feet.

Milton, Vt., Jan. 2, 1871. A. M. A.

REMINISCENCES OF THE NEW ENGLAND FARMER, AND OF WESTERN EMIGRATION.

The prospectus in the last number of the FARMER, announcing the fact that the paper is about entering its fiftieth year, recalls to my mind some remembrances of its early volumes, which may be of interest to your young readers.

About the year 1832, when a boy, I fell in with two or three bound volumes of the FARMER, which belonged to a neighbor of my father, and which I borrowed and read with great pleasure. I remember little distinctly of their contents, except a few lines of poetry, which have lingered in my memory, from that time till the present. There was then an extensive emigration to Michigan, and some poet had broken out in praise of that State, which was then considered "the West." I should be much pleased to see it reprinted, and perhaps you can hunt it up for that purpose. The paper was then published in the quarto form, and made quite a portable, convenient book. I am quite sure that Mr. Thomas G. Fessenden was the editor, in those days; and if I mistake not, he published or edited an almanac, furnishing some very original poetry as heading for the months, of which I remember the following specimens:—

"My dear Madam MAY, I am sorry to say
You look rather sickly and pallid,
As if from some hole, just under the pole
Your Ladyship lately had sallied, &c."

"Some poets sing the charms of Spring,
In rhyme that jingles prettily,
And make their stuff, do well enough
For south of France or Italy,
But then our Spring is no such thing,
No charms has ever she showed,
And I have seen this much praised queen
Look ugly as a tree toad."

Wishing the FARMER a long and prosperous life, I remain yours, A. A. F.

Sherborn, Mass., Jan. 3, 1871.

REMARKS.—One of the editors of the NEW ENGLAND FARMER was among those who made up the "extensive emigration" to Michigan, alluded to by our correspondent, and whose weary journey to "the West" was cheered by the music of that song. Partly to please A. A. F., and partly to gratify ourselves and other veterans of that campaign, we have hunted it up, and publish on another page, all but two of the last stanzas, which describe particular localities, and the richness of the soil. We took up our residence in "Pontiac," where we found more shakes than poetry, though we have never forgotten the melody of "John Anderson my Jo John," in which the song was rendered by Yankee farmers "who'd spunk enough to travel" and voice enough to sing, as the boat glided along on the "raging canawl" on a quiet summer evening. But Michigan is now an old State, Pontiac is a city, and the West is—Who knows where? The old song, however, may "answer with slight variation" for Kansas, Nebraska, or any other modern "Michigania."

STIFLE OUT.

I have a cow that slipped her stifle some six weeks ago. I have put it in place a number of times, but it refuses to stay. Can you tell me any way of keeping it in place? Some of my neighbors said it would callous over and not hurt her; but I do not see any change in her condition from the first. LYMAN ALLEY.

Agawam, Mass., Dec. 27, 1870.

REMARKS.—Having put the bone in proper position, you should, if practicable, so confine the cow that she cannot move the affected limb. This confinement must be continued twelve or fourteen days, during which time the joint should be thoroughly bathed with cold water, twice or thrice a day. But if you do not succeed in keeping the bone in place, you need not fear the loss of your cow; for, as your neighbors have told you, it will "callous over," and will not greatly injure the animal. Considerable time must elapse, however, before complete recovery will be effected.

WHITE WORMS IN PLANT POTS.

Will you please inform me what will keep maggots or white worms from plants? Our plants look thrifty but the ground is full of worms. E. M. R.

Haverhill, Mass., Jan. 2, 1871.

REMARKS.—In reply to this question, our correspondent, S. O. J., furnishes the following:—

We, also, are decidedly annoyed by them, and have found wood ashes an excellent antidote; but if these are not obtainable, lime water will kill them; or a little slacked lime sprinkled on the surface of the earth, and in the saucer of the pot. Apply the ashes with care. Take a teaspoonful of them, a little warm, and scatter over the soil, being careful not to touch the stem or leaves of the plants.

Lime water can be made easily by slacking a large piece of lime in a pail of cold water, letting it settle, and then bottling for use. Warm it, and give each pot a tablespoonful twice a week. Both these remedies act as fertilizers to all plant growth.

ANNOTTO FOR COLORING BUTTER.

I frequently see in your paper remarks about the use of annotto in coloring butter. I have used orange carrots, but I do not think butter keeps so well with carrots in it as without. Will annotto injure the keeping of the butter through the summer?

CONTENTS OF A LOG.

I wish to make a few inquiries in regard to measuring lumber. A log sixteen feet long and two feet in diameter, is measured as one cord of wood, how much cord wood will it make when chopped and split, or how many feet of lumber if sawed?

CORN MEAL AND FINE FEED FOR COWS.

I wish to know which is the best and cheapest feed for milch cows,—corn meal at $2.20 per hundred or fine feed at $2.10 per hundred? These are their respective prices here. M.

Tunbridge, Vt., Dec. 31, 1870.

REMARKS.—Two of these questions relate to subjects which are discussed in this and the preceding numbers of the FARMER, to which we refer our correspondent. We trust some of the boys familiar with wood and lumber measuring, will cypher out the contents of the log.

NEW PLACES FOR POULTRY.

The article in the last FARMER, credited to the *Poultry Bulletin*, in relation to old and new places for fowls is correct. A new piece of land, or an enclosure where no fowls have been kept, is far preferable to an old hen yard. When I first purchased my hill or grove, my success *was wonderful.* My 400 chickens, hatched in March and April, were the admiration of every visitor. As to health and rapidity of growth, they surpassed any flock I have ever been able to raise. An experienced poulterer, while admiring my flock in September, made the following remark, "Well, young man, you will never meet with such success again." His prophecy did not please me, neither did I give it much credit at that time. Yet I have found his statement correct. My opinion is, that the first and second seasons the fowls destroy all animal food, such as worms, insects and their eggs, and therefore do not obtain this most necessary food for young fowls. If any reader of the FARMER entertains doubts upon this subject, I advise him to put a brood of young chicks in an enclosure where fowls have not been raised, and where grasshoppers and insects abound; then place another brood of corresponding age in the old poultry enclosure, feeding with the most stimulating food, and he will soon find the former brood, in size and general appearance, far ahead of the poultry-yard flock.

Salem, Mass., Jan. 3, 1871. JOHN S. IVES.

SHORT-HORN STOCK.

At S. D. Conant's farm in Grafton, Vt., I saw some very fine stock, considering that they are not fed for show, or made so fleshy that the natural proportions of the animal are hidden from view. He has a very fine yearling bull, *Duke of Grafton*, sired by the Duke of Putney, and he by the 6th Duke of Thorndale. In color and form the Duke

of Grafton resembles very closely his grand sire, the 6th Duke of Thorndale, owned by A. Whitman, Fitchburg, Mass. I also saw nine thorough-bred cows which are said to be great milkers. One of them, a three-year-old heifer, is a fine animal. He has three fine calves, all thorough-bred animals.

FARMERS' CLUB.

The farmers of Grafton have a club in successful operation. From what I was told I concluded that the meetings must be very interesting. They are held at private houses, in rotation. The members take their wives with them, which acts as a stimulus to their best efforts. After the discussion a social time is generally enjoyed. I think such a club would be beneficial to farmers in other towns, if they would enter into it with a like spirit and enthusiasm, and for the purpose of improvement in the various branches of agriculture, and for the increase of the general stock of information.

B. D. W.

PLANTING PEAS IN FALL OR WINTER.

One of your correspondents wishes for information in reference to planting peas in the fall. Last winter was very open, as doubtless you remember. Thinking that if fall planting brought forward an early crop, planting in the winter would probably do as well in this respect, and much better as far as liability to rot was concerned, I therefore planted quite a little lot; and now for the result:—

But a small number of them came up, and those that did come at all came several days later than those planted in April. It was near enough a failure to be called one, and has satisfied me that this kind of early planting, and fall planting also, are not to be recommended. My land was light and sandy, just what is needed for such business to insure against rot. P.

Mirickville, Mass., Dec., 1870.

MEETING OF THE AG'L BOARD AT FRAMINGHAM.

I attended the last day's session of the State Board of Agriculture at Framingham, and was very much interested in the lectures and discussions. I consider the lecture of Dr. Nichols worth a great deal to any man who owns even one acre of land. Had I supposed the sessions would be one-tenth part as interesting as this one was, I would have been present at the whole. I wish every farmer in the State could have been there; and I wish to urge my brother farmers to attend these meetings in the future; especially the young farmers. I would say to them that they cannot spend a few days more profitably than by so doing. I consider my one day's attendance the most profitable day's work that I have done in the whole year. The lecture of Mr. Gregory, on raising vegetables, was worth more than a year's experience in the business to any man who has but a small garden to cultivate. I hope that at the next annual meeting, there will be a grand rally among the farmers of Massachusetts. C. B. RATHBUN.

West Berlin, Mass., Jan. 2, 1871.

For the New England Farmer

WINDOW GARDENING FOR JANUARY.

"The icicles hang from each cottage and bower,
Reflecting the moon's paly beam,
The windows are garnished with many a flower
By nature's cold pencil, the frosts chilly power,
Like the wild fancy work of a dream."

Though it has been winter for many a week, it is not until the latter days of the departing year, that we have felt his icy breath. It was left for Christmas to inaugurate his reign, and on that holy day the mercury ranged far below the all-important cipher; and though we had, as we supposed, fully protected our *window gardens* by double windows, and folds of thick paper, yet King Frost touched some of the plants with his blackening fingers, and ruined their beauty! But only one window was thus injured, and we rejoice in the possession of three others, so all our pets are not gone. The puny frost-bitten darlings were put into a dark cellar, and though their leaves have fallen, a little desirable rest will strengthen their resources, and in a few weeks we shall give them stimulants, light and air, and by March they will be a "thing of joy." A *Belgium Daisy* which was in full bud has suffered the most, all its leaves are blackened and crumpled. But we cannot expect to cultivate "Window Gardens" without some drawbacks, some trials of patience, and we can only be thankful that *all* did not die; and not murmur and complain over the few that suffered. Their loss may be the means of saving others far more precious, as *Pater-familias* will now take more heed to the fire in the "soap-stone." We have taken possession of a sunny, southwestern window, in the china closet; have improvised a plant-stand out of a light-stand and a wooden moulding board, with a shelf added to the upper case, and feel secure against the depredations of the frost henceforth. We notice that "*A Housekeeper*" would like minute directions for the construction of "Window Boxes;" and would also like to know how to cultivate them. We are very glad to furnish such directions, and trust many of our readers will take an interest in floriculture and write us of their wants. We shall be happy to supply all the information we possess on the subject.

In last week's issue we answered Etta Parker's questions concerning a moveable garden on a light-stand; but most "Window Boxes" are made to fit tightly into the window shelf. Those of our readers who live in old fashioned houses, with deep window recesses, furnished with tight window shutters, have at hand an admirable convenience for a "Window Box;" and can make one exactly fitted to it. But such charmingly ancient houses are not very abundant, and those of us not fortunate enough to dwell in one, must arrange a Window Box with a moveable leg attached by a hinge to the middle of the "box" and resting upon the mop-board of the apartment. The boards for its construction should be of inch stuff for the bottom, and the sides and ends of half-inch stuff, all well seasoned; and the foundation board ought to project an inch or more at the outer side, and at both ends. The boards must be closely dove-tailed together, or tightly fastened with shingle nails. Now line it with zinc, or if preferred have a tin pan made to fit it easily, and have it painted green, so that it will not rust out. By this arrangement, it can be turned about occasionally, thus

avoiding the chief objection to these "boxes" —that is, their tendency to let the flowers grow one sided. The outer edge of the "box" can be ornamented at the maker's pleasure. Young ladies can exercise their ingenuity to invent original adornments, or can follow the directions given to Etta Parker.

The stiff gray and white mosses or lichens, growing so plentifully in the pine woods, afford an exceedingly pretty ornament. If wet in water, they become pliable, and can be fastened on with carpenter's glue, or tied on with brass thread wire fastened to small brads on the inner and outer edges of the "box." It presents a charmingly rustic appearance, and can be made of shaded colors by a judicious selection of the lichens. If cleft sticks of birch, oak, spruce or maple are used, they can be fastened to the wood with small brads, and varnished with gum-shellac dissolved in naptha, or in tarpentine, or with common varnish. Gnarled boughs or roots can be used;—the roots of the mountain laurel are much sought for ornamenting rustic baskets and flower stands, and if at hand, will be found very desirable for the "box," and a long root can be used as a trellis to train a vine upon. When the "box" is made and trimmed, it must be filled with a layer of fine charcoal bits or dust, at least an inch thick; this is needful to prevent the soil from becoming sour. It acts as a purifier and also fertilizes the earth. Now fill up with the richest soil you can procure; if possible, purchase it of a florist,—its cost will be small,—and your plants will repay your labor far better; but if this is not obtainable, use the best loam and mix with it equal parts of thoroughly decayed barn yard compost, and scouring sand. This is an all important ingredient in all plant compost, and the neglect to provide it for our plants, is often the cause of their failure to grow luxuriantly, and repay us with buds and flowers. Bake the mixture in the oven for several hours, so as to kill all the larvæ of insects contained therein; let it cool, then plant the "box." In this operation some taste is needful, the tallest plants must occupy the centre, the dwarfs, the corners and edges. *Lycopodium* is the prettiest for an edging, or Stone-crop may be substituted. *Belgium Daisies, Czar Violets, Cyclamens* and *Primroses*, are each and all desirable, for they blossom continually, and require but little care. The pine woods will give us the *Partridge Vine* with its rich, waxen, red berries. The *Cranberry Vine* is also considered a pretty plant for a "Window Garden." Were it a *novelty*, imported at a high rate, with a long, many syllabled name attached to it, it would doubtless possess many admirers; but as it grows in marshes, in our own country, it will not be highly extolled. But if it can be obtained, fair reader, please plant it, and admire its pure white flowers and scarlet berries, even if you do associate them with roast turkey!

Some one of the many species of the *Variegated Foliaged* plants must find a place in the box; in the absence of flowers, it will partly supply their place. As we write, the sun shines brightly through the magenta and dark crimson foliage of an *Achyranthes gilsonii* and makes it a glory entirely overshadowing the double *white Primrose* by its side, and the *Cyclamen* near at hand, though both are in full bloom.

A winter blooming *Fuchsia* is also indispensible. There are two varieties that will bloom from eight to ten months in the year;—one is *Serratifolia*, which has a brilliant crimson corolla with petals of a darker shade. The other is *Speciosa*, a common species, doubtless known to all our readers, but it is always desirable. Its petals are of a waxen pink, while the corolla is of a brilliant crimson. The latter grows to a great height, but can be topped off, and trained into a handsome tree. *Mignonette* and *Sweet Alyssum* can be sown in the "box" and will bloom profusely, if only two or three plants are allowed to remain.

Bouvarda elegans is a very lovely plant,—its rich coral-red flowers are very plentiful.

Tom Thumb Geraniums are also beautiful for this purpose.

Nierembergia will bloom all the season, but its flowers are small.

The Euphorbia, with its bright scarlet leaves, resembling the plumage of tropical birds, is a great addition to every collection.

Abutilon Thompsonii, which possesses variegated leaves, green, shaded and mottled with yellow, is of easy culture, and with its beautifully striped bells, is suitable for all sorts of "Window Gardening."

Abutilon Santana has flowers of a dark brownish crimson, and is the handsomest of this species.

Torrenia Asiatica blooms winter and summer, and is lovely for hanging baskets, window boxes or gardens,—its flowers are of a light blue, marked with deep violet.

Smilax is especially pretty to train over trellises, for its peculiar growth and graceful beauty recommend it to all. It is said to grow better in wood than in pottery, and it can be made either to climb or to droop. It is a bulbous-rooted plant, but can be grown from seed. It is much sought after for table decorations, as well as for wreaths and garlands.

Linaria Cymbalaria, Coliseum Ivy—sometimes called *Ivy-leaved Snapdragon* is also much used, on account of its lowly habit,—indeed nothing can be prettier for a drooping vine.

These "gardens" possess an advantage over plants in pots, because they do not become dry so rapidly, and can be more easily showered, and the inevitable dust from the carpet sweeping removed. A miniature watering pot will improvise a summer shower, and the window panes and sashes can be protected from the tiny drops, by sheets of paper in-

serted between them and the plants. *Be sure* to water with warm water—*quite warm* to the hand. These frosty mornings, the earth will be chilled enough, to bear warm with profit; but don't water so plentifully that the roots decay, nor yet allow the soil to become too dry, and crack open. Give a goodly supply every morning, when, by digging down with a hair pin, you find the soil dry half an inch down. Choose a southeastern or western exposure—give all the light and fresh air possible. Stimulate occasionally as we have given directions in previous numbers and *we know* that you will derive much pleasure and profit for the time and labor you expend;—far more than you can gain by filling your brain with many of the "novels" of the period; for the flowers will speak to you of the land beyond the sun where sin and sorrow are unknown.

S. O. J.

For the New England Farmer.

BEST FEED FOR COWS.

Inquiries of Mr. Hart—Shorts and Corn Meal in connection with Oil Meal and Cotton Seed Cake—Value of Manure from various Feeds—To Drive Lice from Cattle.

I have been greatly interested in looking over the last number of the FARMER, and very many of the articles have received two good thorough and careful readings, as well as being made the subject of more or less conversation.

The article written by T. L. Hart, and taken from the *Germantown Telegraph*, is worthy of a careful reading by every farmer that keeps a cow. I would like to have Mr Hart make some of his statements a little fuller. "Last winter," he says, "I found that heavy feed, such as corn, wheat and rye shorts, fed to twelve cows, pound to pound, did not make as much milk as wheat-bran, into nine quarts a day." And then he says he would not dare to feed so heavily with shorts on account of their weakening effects.

Now I want to know the quantity of corn meal and shorts fed to each cow per day? Also how many quarts or pounds of shorts, will suffice as an equivalent for his mixed feed? This year he is feeding one bushel of cob corn meal to two bushels of shorts. Is this the amount fed in a day, or only half the amount? As he says he feeds twice a day.

A friend to whom I have just read the article says that he has been feeding to his cows, since the middle of October twelve pounds of shorts a day, with two small feedings a day of hay or straw; generally one feed of hay, and one of either oat or wheat straw. His cows have done well and are in prime condition. One of them has laid on so much fat, that she is in good condition for the shambles, and he has stopped feeding her shorts, and, instead, is feeding three quarts of corn meal to her. She calves next summer.

I am feeding four cows with shorts, at the rate of ten quarts daily, to each, with good results so far, and yet I think a feed of eight quarts of shorts and one quart of meal would be better. Still my cows are in fine condition. Ten quarts of such shorts as I am feeding will weigh 7¾ lbs. Will that amount affect the cows injuriously? My neighbor does not complain of its weakening his cows, with a feed of twelve pounds to each; although he thinks that they walk as though they were a little stiff, which he attributes to the fact that he keeps them constantly in the stable, excepting that he lets them out just long enough to drink.

I would like to know if any of your readers have ever fed, in connection with shorts, either cotton or linseed meal? Would not a mixture of either of these be advantageous with shorts? The manure, with us, is one of the great objects of feeding grain, as we want it to be rich, so as to produce the best effects on our tobacco. One ton of decorticated cotton seed cake will produce manure that is worth $27.86—and linseed cake $19.72; while one ton of corn gives manure worth only $6.65, meadow hay $6.43 and clover hay $9.64, and carrots and roots generally run below $1.00, gold value. Is there any danger in feeding rich cotton or oil meal to cows? We know that if your Maine subscriber who inquires

How to get Rid of Lice on Cattle,

Would feed his cattle and calves oil meal for a few weeks he would drive the lice all off his animals, and then his cattle will "*laugh*" to see them scamper! We have also used Kerosene. The dregs from a cider barrel, or even vinegar, sopped into the hair is said to kill them. All these remedies, however, are temporary with me, while oil meal is the sure cure. Feed a calf a handful a day and there will not be a louse found near him, and the calf will grow enough faster to more than pay the outlay.

VALLEY FARMER.

Whately, Mass., Jan. 2, 1871.

ON BREEDING HORSES.

The severe work to which young horses are now subjected is the chief cause of the present great liability to disease. If they were well fed, and allowed to mature their constitutions before being trained, they would, in all probability, remain sound for a considerable time. This, we fear, is not likely to be attended to. The *farmer* has so many demands on his purse that he can scarcely afford to allow his horses to roam at large till they reach their fourth year; and the turfite finds it more profitable to race his colts at two years' old, than to keep them over, at heavy expenses, until such time as humanity, and a due regard to the soundness of the animals, would point out as the proper period for their first appearance on the turf. The necessities of the one, and the avaricious disposition of the other, thus ren-

ders it next to impossible to get good sound stock, either to use or to breed from.

The system of crossing which has been adopted since the introduction of thoroughbred stallions around in the country, appears to be a further cause of the degeneration of our general stock. Let his shape and qualities be good, bad, or indifferent, the one which possesses a sprinkling of blood is sure to be the animal which will be selected as a sire. His light action, showy appearance and high-sounding pedigree will be a sufficient recommendation to those who are ignorant of the various *points* and *qualities* which are connected with the strength, substance, durability and disposition of the animal. Besides, the same horse is certain of being put to a great number of mares of all sorts, shapes and sizes, without the slightest regard to that exact adaptation of form and size of dam, which is absolutely necessary in order to secure a satisfactory result. Breeding from blood-stallions is highly commendable, provided it is done with judgment and discretion; but the practice of *violent* crossing is directly objectionable, and cannot be too strongly condemned. Extremes in crossing are very rarely successful; and it is really astonishing to see farmers so constantly putting their complete cart-mares to thorough bred horses, expecting to have foals of a class fit for fast work, whereas nine times out of ten they are fit neither for slow nor fast use.

By the practice here referred to, breeders expect to produce a horse combining both strength and action; but they are very frequently treated to an animal of such a nondescript form, that he is fit "neither for the land nor the sea." In place of being a fair medium between the sire and dam, he will take chiefly after the one in some parts, whilst in other places he will lean entirely to the opposite side; and he is consequently so badly balanced and proportioned that he is comparatively useless. His temper, moreover, is frequently characterized by a want of conformity to the purpose for which his owner might think him in other respects best adapted.—*Dr. N. H. Paaren, in Prairie Farmer.*

POSITION OF THE HORSE'S NECK.

The shape and position of the horse's neck should be particularly observed by the person who trains, rides or drives the horse. It is rare to see two horses formed so exactly alike, that they can bear to have their heads elevated to the same height, without painfully interfering with the action and power of all parts of the body. How unseemly and how barbarous is it, then, for some ignorant trainers, riders and drivers, to screw up all the horses, no matter how diversified their shapes, that unfortunately fall into their hands, to the same point, for the purpose of giving them what they are pleased to call a graceful carriage? Do such people ever imagine that gracefulness results from a peculiar and appropriate adaptation of the different parts of the animal to each other, and not from a partial distortion, such as we often see exhibited under the influence of the heavy bit, or that most brutal invention, the bearing rein?

Were it not for its cruelty, it would be very amusing to observe the manner in which some men in riding or driving prop themselves up, for the purpose of pulling, with might and main, at the poor animals' mouths, in the foolish hope of being thus able to keep them from falling, at the same time that they render them so much more attractive to the passers by. Their task is certainly a very anxious and laborious one, and, if persevered in, it is sure to end with broken knees, and perhaps a broken nose. The horse is placed in such an unnatural position, that his entire action is interfered with, and he gets such a habit of leaning on his bit, instead of watching for himself, that he is nearly certain of dropping the first moment his governor forgets the pulling process. A taut rein, with a quick hand, will have far the best chance for keeping a stumbling horse on his feet. He will then depend on his own vigilance and exertion, in the same way as he would if he were running at freedom.—*Dr. Paaren in Prairie Farmer.*

THE IRA ALLEN FARM.

Our correspondent, "Z. E. J.," furnishes the *Vermont Farmer* with a description of this farm, now under the care of C. P. Allen, Esq., Mr. Burnabee, farmer. It is in the town of Ira'sburg, once mostly owned by Ira Allen. Within the last two years about three and a half miles of stone wall have been laid in road and division fences. The stones had to be drawn but a short distance, and their removal improved the land.

A New Barn

has been built, fifty by seventy feet, and twenty feet posted, above a cellar eight feet deep under the whole barn. This cellar is to receive the droppings from the stable above, and the great amount of muck that is mixed with manure. Upon this the design is to winter ten pigs, the number to be increased indefinitely by breeding in spring and summer. The seven pigs now here (Dec. 26,) are fed upon barley meal, and the usual swill from the dairy.

The first story of the barn, above the cellar, is seven feet high and is divided into horse stable, granary, cow stable, and six pens for calves or for hospital purposes. The stanchions are so arranged that the cows stand in two rows facing the center of the barn, a feeding walk between them, and back of the cows on each side are the pens referred to. Twelve cows were wintered last year; twenty are now in the stables, and the number is to be in-

creased to twenty-five, and it is expected the farm will produce enough next year to winter them. They are good native cows, red in color and good size. In the granary on this floor is part of the thousand bushels of grain raised this year. When threshed it is run by spouts from the floor above. We go up stairs to the hay and grain barn. The floor is through the centre seventy feet long, and on each side are the bays of hay and straw. As this barn is on nearly level ground, quite an embankment has been made in the drive way to the main floor.

Muck, of which Mr. Allen said he would like to have a thousand cords, is dug and drawn to the barn for $1.50 per cord, the measure being taken of the space in the bed from which it is removed.

MAKING CHEESE AND BUTTER.

The following statements made by J. C. Oliver of East Charleston, Vt., to whom the first premium on cheese and butter was awarded by the Orleans County Agricultural Society, at its fair at Barton, last fall, are published in the *Vermont Farmer*:—

"I submit the following report as to the manner of making my cheese: In the first place, I am careful to have my pails perfectly sweet, also my pans and cheese box. I strain my milk in pans at night. In the morning I skim my night's milk, put the morning's milk with it in the box, heat the cream almost scalding hot, and stir it into the milk. Then the milk should not be quite as warm as when milked from the cow; put in rennet sufficient to fetch it, and let it stand half an hour; cut it in small checks, and let it stand another half hour, then break it up with the hands. Let it settle, then draw off the whey, and heat it scalding hot, enough to warm the curd, repeat till the curd will squeak between your teeth, break the curd each time when you ut on the whey. Then draw off the whey, t it; three teacups of salt to forty pounds of cheese, let it stand till it is cold, then put it in the press.

My method of making butter. In the first place I deem it necessary that my milk should have good air. I do not mean by this, to have the wind blow upon the milk, but have it well ventilated. Then skim as soon as it changes, churn and wash the butter until it is free from buttermilk, then salt, three-fourths ounce of Ashton salt to the pound.

ONIONS.—Many complain that onions d not keep. The trouble is in keeping them too warm. The onion is a bulb, a plant at rest, and the least warmth starts it into activity. It is much better that onions should remain frozen through the winter, provided they can thaw gradually, than to put them in a cellar or other warm place where their vegetative powers will be aroused. If put in large heaps onions will be sure to spoil; but if spread in thin layers and covered with hay and straw, so that if frozen the thawing may be gradual, they will keep well through the winter. It is the custom with onion growers to get their crop to market as soon as possible. If they were to provide proper storage, they would realize much more for them when sent to market later in the season.—*American Agriculturist.*

For the New England Farmer.

MOUTH AND FOOT DISEASE IN CATTLE.

Eruptive fevers, *exanthemata*, constitute a large class of diseases, which are presumed to depend upon the presence of some poison in the system, its subsequent elimination, giving rise to the distinctive symptoms of the malady.

The mouth and foot complaint belongs to this class of disorders; and although ordinarily one of the least fatal, it sometimes assumes a very severe form, and occasions considerable destruction of the tissues of important parts. Perhaps there is no disease of animals that varies more in the degree of malignancy which it exhibits in different seasons, under apparently similar conditions. Foreign cattle frequently suffer from the malady in its most virulent form; but English cattle are not exempt, under certain conditions which are favorable to the development of the virus, from the most violent manifestation of the morbid action.

Conditions of Liability to, and Origin of the Disease.

Susceptibility to an attack appears to be increased by travelling, by pregnancy, parturition, lactation and also by change of locality. But neither age, condition, management, climate, temperature nor any common causes of disease, seems to exert any modifying influence. No extremity of privation, nor the continued action of ordinary causes, is capable of inducing it; and one reason for the indifference which has been shown in respect to its ravages, is to be found in the belief of its spontaneous origin, an idea which arises out of the observation of its frequently unaccountable appearance in isolated places.

The conviction of its spontaneousness has gained strength from the fact long recognized, that cattle when being travelled from fair to fair are often attacked. But there is nothing remarkable in this fact, when it is remembered that a tuft of grass by the road-side often holds a sufficient quantity of saliva from the mouth of a diseased beast to infect a herd, and the short period of incubation of the affection accounts for its sudden outbreak during a journey which occupies only a few days.

Some of the conditions which are essential to the spread of the disease are known, but others are obscure. It is certain that the malady is eminently contagious and infectious; but it is also true, that its extension in certain years has been apparently governed by the laws which regulate the spread of epidemic diseases like cholera; and it has been found impossible to determine whether the majority of the attacks are to be attributed to the operation of morbific matter or virus, or to certain noncognisable influences, the existence of which can only be inferred from the effects produced.

A reference to the previous observations on the history of the disease will show that, while there have always been centres of infection in England, the malady has prevailed over a large extent of country only at intervals.

Not caused by Ferment in the Blood.

It is not necessary to devote any time to the examination of the hypothesis, which refers the origin of all contagious diseases to the presence of a ferment in the blood. If the idea is merely advanced as an ingenious speculation, it may be left to amuse those who find an interest in the investigation of chimeras; but if the suggestion claims to be accepted as a theory, it may be refused on the ground that chemical and microscopic research have alike failed to demonstrate the presence of the germs of ferment, or the occurrence of any process in the circulating fluid at all resembling fermentation, either in its progress or its product. Examinations of the blood of diseased cattle have been made recently, in the sheds where the sick animals were kept, and the highest powers of the microscope have been used in the investigation; but no unusual organic particles have been found. The fluid is in a state of excessive molecular activity; the red discs are nearly all of them stellate in form, and change their aspect frequently, finally assuming the circular form. White corpuscles, *leucothytes*,, are more numerous than they are in healthy blood, and there are also seen many minute spherical bodies freely moving in all directions. Backteria and Vibriones are constantly found; small masses of living germinal matter are also present; but it is worthy of particular remark that all these bodies have been seen in the blood and other fluids of animals affected with non-contagious febrile diseases.

Further, it may be accepted as a positive truth, that organic particles which possess the power of communicating infection to the healthy system, cannot be distinguished from those which assist in the support of the tissues during the process of nutrition. Microscopic examinations of the discharges from the eyes, the saliva, the contents of vesicles, and also of the milk, have resulted in the discovery of very interesting changes in the molecular constitution of the several secretions. The saliva when carefully collected, without touching the skin or mucous membrane of the mouth, is quite pellucid, and contains small stellate crystals, and minute spherical bodies, *monads*, which move with activity in the fluid. In the limpid fluid of the vesicles there are large nucleated cells and masses of living germinal matter, besides monads, bacteria and vibrionc. Similar bodies are found in the fluid discharge from the eye.

Effect on the Milk.

Specimens of milk obtained from cows in various stages of the disease, have been submitted to microscopic inspection repeatedly, for the purpose of ascertaining, if possible, whether or not any change occurs in the constitution of the fluid likely to be injurious to the health of those who partake of it. Nearly all the specimens of milk which were tested had a low specific gravity, (1024) and generally a fair proportion of cream was thrown up. There were invariably found large granular cells, or white corpuscles, having the general characters of the pus globule. The milk from one cow was examined from the commencement to the termination of the disease, and for three weeks after recovery; and it was observed that the pus-like bodies remained during the whole time. At the worst period of the affection, the bodies were numerous, and as the disease declined, they become fewer in number; but some were seen on the last examination, three weeks after recovery. Monads and bacteria were among the cells detected in every specimen, and these bodies remained unaffected, either in their form or rapidity of movement, by boiling. The specific gravity of the milk was found to rise slightly during convalescence, from 1024 to 1027, the last number being within three or four degrees of the normal standard. In two instances the specific gravity of the milk was respectively 1032 and 1034, the quantity in each case being reduced to one-fifth of the ordinary yield.

Milk taken in the evening from diseased animals, gave evidence of the commencement of decomposition on the following morning. This was, in some measure, due to the high temperature which prevailed during the time the observations were made. When boiled, the milk remained good for twenty-four hours, under the same circumstances and at the same time.

Effect of Diseased Milk on Animals.

What influence the numerous pus-like globules and granular cells, with the living organisms in the form of monads and bacteria, may exercise upon the health of the human subject it is impossible, in the absence of direct experiments to determine. But the evidence in respect of its effects upon the young of the lower animals is very conclusive. Some years ago, Professor Simonds lost three valuable calves in one day in consequence of allowing them to suck a cow which was suffering from the disease in the early stage. He also produced eczema in pigs by giving them the milk immediately after it was drawn from a diseased cow. Continental observers also allude to instances of the poisonous action of the milk on young animals.

Since the above observations were made, other cases of sudden death of calves from sucking the milk of diseased cows, have been recorded. Within the last few weeks calves, which were apparently well when left at night, have been found dead in the morning from this cause; and there is too much reason to apprehend that to the young of the mammalia in general, the milk from cows affected with mouth and foot disease is highly deleterious.

Probably the most recent experiment with milk from a diseased cow was made in my own house. During the early period of the prevalence of the disease, when milk was daily sent to me for examination, I gave to a young cat a liberal supply of that which was left from my experiments. The animal shortly became very weak and ill, and, after the first few days, declined to accept the diseased milk, although no other kind was supplied in its place. Indeed, at the time, the milk on my own table contained an abundant quantity of the morbid elements.

Among the specimens sent for examination were some taken from animals which suffered from the effects of the disease in one or more quarters of the udder. These examples contained little else than pus-corpuscles and exudation cells, with monads and bacteria; the milk globules were few and far between. This abnormal condition of the secretions may be a subject full of interest for the pathologist; but it is sickening to know that such morbid matter is used to swell the general bulk of the morning and evening quantum of milk which is supplied to the population, who, if any suspicion is aroused, are quite reassured by the dairyman's entirely romantic statement, that "when cows have the disease all the milk dries up."

Flesh of Diseased Animals Harmless.

Meat from diseased animals has also been carefully examined, and the results of the investigation are altogether satisfactory. No morbid products have been detected, and excepting the presence of some of the parasitic bodies,—*psoro sperme*,—which were found abundantly in the flesh of animals dead of cattle plague, and other malignant diseases, nothing of an abnormal kind has been observed. It may, therefore, be safely assumed that the meat of animals affected with mouth and foot disease is harmless; the more so that it always, unlike milk, undergoes some culinary process, before being consumed.

Communication of the Disease.

From experiments, which will be hereafter referred to, it appears that the contagion is in a most

active form in the saliva, and it is remarkable that this fluid contains the fewest morbid products. Nevertheless its contact with the interior of the mouth of a healthy animal quickly causes the development of the disease.

There is no evidence of communication of infection by the skins or other parts of dead animals; and it is not certain, although very probable, that the gaseous emanations from diseased beasts are dangerous to those in the immediate neighborhood. The spread of the infection along a certain line of country from one farm to another is supposed to indicate contamination of the atmosphere; but, in considering this mode of communication, the fact that animals often remain unattacked within five hundred yards of diseased cattle, must be taken into account.

Period of Incubation.

According to the general acceptation of the term, the time of incubation of an infectious disease is the period which elapses between the introduction of the virus into the system, and the manifestation of symptoms which indicate the existence of the disease. In this ordinary sense the expression is now used. Some difficulty usually presents itself in reference to the determination of the precise moment of infection. It does not follow that healthy animals herded with diseased ones should at once become the subjects of the malady; on the contrary, they may resist its influence for some time, and, therefore, conclusions which are drawn from observations of the natural progress of an infectious disease are often erroneous, and always doubtful.

Direct transmission of the virus into the system of a healthy animal, furnishes the only reliable means of ascertaining with absolute certainty the moment of infection. Tested in this manner, the period of incubation of eczema ranges from thirty-six to forty-eight hours. If the rise of temperature be taken as a positive symptom, which it is not, the incubation stage will be much shortened, as this elevation of internal heat sometimes precedes by twelve hours the formation of vesicles in the feet or mouth. The extremely rapid action of the virus is evident from the fact that symptoms of fever are apparent in thirty hours after incubation, and the full development of the characteristic signs, —the formation of vesicles,—is seldom delayed beyond the fourth day.

Professor Simonds ascertained as early as 1839, that the introduction of a small portion of hay saturated with infected saliva into the mouth of a healthy animal, caused the formation of vesicles in the mouth and feet in forty hours; milk from a diseased cow given warm to pigs caused the disease in three days.

Experiments with hay saturated with saliva were repeated by us in 1867, with the usual result; the animal took the disease in a mild form, and completely recovered in the course of a week after infection.

Failure of Inoculation.

Inoculation by puncture, and the introduction of the contents of vesicles, failed to produce any effects in cows, sheep and pigs.

These observations have an important economic and judicial bearing, because they enable the veterinary pathologist to assert in reference to an outbreak of eczema in any locality; that the affection was in some way communicated not more than four days prior to the development of the disease.

Treatment and Remedies.

1st. Enforce stringent sanitary laws.

2d. No attempt, unless under competent direction, should be made to open the mouth, or to horn down any fluids, alimentary or medicinal. If the fever is very severe, an ounce of bicarbonate of potass may be dissolved in the drink water, and a solution of the same,—one part to forty parts of water,—may be syringed over the feet frequently, for the purpose of keeping them clean and cool. The magic healing powders prepared by Dr. A. J. Hopkins of Providence, R. I., made into solution and syringed into the mouth and feet several times a day, arrests the disease at once, with slight loss of flesh. I should recommend it to all who are troubled with the malady. Tonics and stimulants are necessary, when the disease assumes a low form of fever, and they are best administered in the food. Salts of Iron and stout may be employed with advantage in these cases. It will be rarely necessary to give any other tonics than properly prepared and nutritious food.

A. BASSETT,
Veterinary Surgeon.
242 India St., Providence, R. I., Jan. 12, 1871.

EXTRACTS AND REPLIES.

SPREAD OF CONTAGIOUS DISEASES AMONG STOCK.

Many people are surprised at the rapidity with which contagious diseases spread among stock; and at first view, they do appear to be more fatal and harder to be controlled, than similar diseases among men. Why is this? Is it because contagion in the human species is different from contagion among our stock, or is it the result of greater carelessness and ignorance in treating the latter? A moment's reflection will, I think, reveal the difference.

Suppose in a case of small pox, scarlet fever, cholera or any contagious or infectious disease, the patient was kept in one room with the rest of the family; no matter how large the room or the family, both well and sick occupied the same apartment day and night; breathed the air, drink water and ate the food that had been kept in the room for hours; suppose, also, that no care was taken to avoid contact with the bed, clothing, person and even excretions of the patient, how long would it be before all the family would be sick? And if neighbors and friends came in more frequently than usual, how long time would it require to carry the disease through the town and country?

Contagion among stock has precisely the same means for spreading rapidly, when the infected animal is kept in the same stable with the well. The breath, exhalations and vapors of the sick, and their excrements pervade the whole building; the hay becomes infected; water, being a ready absorbent of gases soon becomes infected; the clothes of the attendants are infected, and everything in the barn possessing an absorbing power is more or less contaminated. Under such circumstances is it strange that a disease quickly runs through a herd, and if neighbors and strangers throng to the barn and spend an hour or more in its infected atmosphere, and in contact with infected substances, is it a wonder that other herds are soon affected?

In the present light of science and experience in treating contagion among ourselves, there is no doubt that the rapid spreading of the present cattle disease arises from negligence. And there is as little doubt that the prompt adoption of well known precautionary measures, with the help of skilful veterinary surgeons would enable us to control them better.

The occasional prevalence of contagious diseases proves the benefit of having a small stable, for a sick room or hospital. This should be light, airy, dry, warm and comfortable in every respect, and at a proper distance from the barn. Where there is such a room and the affected animal is removed to it at once, and no others allowed to come near it or in contact with anything used in it, and the attendant takes due care to change his boots, fumigate his clothing, &c., there is greater hope and certainty

of checking its ravages. It is plain that persons having the immediate care of cattle should exercise extreme caution in visiting an infected barn. It should be regarded as a pest house; and it is not safe to buy hay or anything from such a barn for some months after the disease has passed away. When it is understood how easily such diseases are communicated, the wisdom of the legislature passing stringent laws to regulate the transporting or driving of cattle will be fully admitted; and it is the duty of every owner of stock to help enforce them and all other minor prudential measures that tend to check the spreading of these plagues.

Lawrence, Mass., Jan., 1871. N. S. T.

BOOK-KEEPING FOR FARMERS.

Will you please show me through the medium of your valuable paper, some simple method of book-keeping suitable for a farmer,—something that will combine day-book and ledger. It is not customary with many farmers to keep any book accounts other than a mere memorandum. I do not see why it is not as necessary for a farmer to keep his accounts straight, as for a merchant or any other business man. The new year, which is so near at hand, will be a good time to begin.

J. W. ROBINSON.

Exeter, N. H., Dec. 29, 1870.

REMARKS.—Blank books all ruled and headed have been prepared for farmers' use, and we believe are now for sale, but we have forgotten the address of the publishers. But we do not suppose such books are absolutely necessary, however convenient they may be, at the commencement of keeping farm accounts. If farmers would keep correct accounts with their fields, crops, house, barns, cattle, horses, &c., we think the balance sheet would show an amount of income which few suppose they realize. Credit the buildings for rent, the horse and carriage for every ride, the crops for the board of each individual, the oxen for their labor, the cows for their milk, the poultry for eggs and chickens, the pigs for their pork, &c., and perhaps reasons would be divulged for the way in which large wages are dissipated by mechanics and clerks in villages and cities. But from the way in which labor is done and crops are harvested on farms occupied by families who "live within their own means," and produce a "little of everything," book-keeping of sufficient system to show all these particulars might require an amount of skill and perseverance that few possess. We believe it is much more difficult for a farmer to keep accounts that will show cost of production of particular crops, profits of particular fields, animals, improvements, buildings, &c., than it is for mechanics or merchants to keep such accounts of their business. And we sometimes think that those writers and talkers who exhort farmers to keep books, and censure them for not being able to show the exact cost of every crop they raise and of every animal they keep, expose their own ignorance of the details of farm management. Still we would by no means discourage farmers from an attempt at keeping accounts. It is an exercise they need. They work their bodies too hard and bother their brains with figures and writing too little. And to help our correspondent and others who are disposed to make the new year a little more happy by an experiment in book-keeping we copy the following plan from the *Country Gentleman*, which includes day-book and memorandum and directions for ledger. Here is a leaf of the day-book or blotter:—

	November 12th, 18—.		
	Sundries Dr. to Labor Account:		
	Barn for 4 men, at $1.25, .	$5.00	
Cow Fuchsia calved.	Garden 1 do. . . .	1.25	
	Improvement account, 2 men altering barn, . . .	2.50	
Heifer calf, *Nora*.	Field No. 1, 7 men gathering turnips, ...	8.75	
			$17 50
	Sundries Dr. to Barn Account:		
	Field No. 1—use of cart, .	1.50	
	do. No. 2—2 teams ploughing, ...	6.00	
	Family—7½ gallons milk .	1.88	
			9 38
	Barn Account Dr. to Sundries:		
	Field No. 11—2066 bush. potatoes, at 30c . . .	619.80	
Got in last of potatoes.	No. 15—425 bushels potatoes, at 30c	127.50	
	No. 15—22 loads corn fodder, at $20, ...	440.00	
			1187 30
	November 13th.		
	Cash Dr. to Barn Account:		
	100 bushels Oats sold		80 00
	Labor Account Dr. to Cash:		
	Paid off James Dixon, ...		70 00
	Sundries Dr. to Labor Account:		
	Barn, 4 men, ...	5.00	
	Garden, 2 men, ...	2.50	
	Field No. 5, 4 men (ditching,)	5.00	
			12 50
Star-face took Alderney bull Phillip.	*Sundries Dr. to Barn Account:*		
	Family—5 galls. milk, . . 1.25 1 bush. potatoes, 60		1 85
	Field No. 1—2 carts hauling stone, ...		2 50
	Garden—2 loads manure, . . .		2 00

Make the entries in the day-book—don't be afraid of using paper,—very particularly and full, and do it every day. The habit of doing this must be fixed. A failure in this will spoil the whole. Have a name or number for every field and every animal. These accounts should be posted at the end of every month.

"Open an account in the ledger with each field, charging them with whatever manure is put upon them, crediting it to the barn,—also for use of teams and labor in ploughing, &c. Charge the barn with the crop when hauled in. This will show, after labor is charged, what each field has yielded. So there must be an account opened with the barn, which should be charged with all stock, implements, &c., and whenever any thing is sold it should be credited to the barn, so that at the end of the year, after stock is taken and valued, this account will show what the farm has made or lost. These accounts, with Cash, Profit and Loss, Labor, Improvement, and Family Expenses are all the farmer need open in his ledger, and he will find, as he becomes acquainted with book-keeping, that he is greatly interested in it."

CRIBBING HORSES.

Having seen at different times in the FARMER, extracts and replies respecting cribbing horses, its cause, and cure, I take the liberty to say, that the worst cribbers I ever saw, were horses that had always been put to the hardest kind of work, and I further state from the best authority, that cribbing horses have been entirely cured by sawing between their front teeth with a very fine saw.

WORMS IN THE LUNGS OF PIGS.

Tell us what is the matter with the pigs. I had a litter of pigs in October. They did finely for three weeks, then they commenced coughing, stopped growing, and two of them had what I called the blind staggers, but they lived along for three weeks, choking and staggering about for some time after eating their meals, and then one of them died. On examination, I found hundreds of worms crawling out of his mouth, the size of a rye straw, and from six to nine inches in length. I then opened him and he was full of worms,—thousands of them. In a few days the other died in the same way. After the first pig died I commenced putting ashes into their feed, and once in two days gave sulphur. The rest of the pigs have ceased coughing, but are little runts, and do not grow. Others have lost their pigs in the same way. H. SPRING.

Washington, Mass., Jan. 9, 1871.

REMARKS.—There can be no doubt that the parasitic worms mentioned by our correspondent were the cause of the disease and death of his pigs. And it is possible that the cases in Mirickville, mentioned in the FARMER of Jan. 14, as supposed cases of lung and kidney or liver diseases may have been produced by the same cause. Since writing our remarks on those cases, we have seen statements in the western papers which lead us to think that this may be the case.

A correspondent in Epworth, Iowa, writes to the *Western Rural* that he has lost ten fine Chester Whites, and that on examination he found the lungs filled with worms the size of a cambric needle. His description of the symptoms is about the same as that given by Mr. Spring. The Veterinary editor of the *Rural*, after some general remarks on the way in which different "entozoa" affect animals, such as Flukes in sheep, "Strongylus"—little round worms—in calves, sheep, pigs, fowls, &c., says:—

"In Eastern Europe it is not very uncommon to find large numbers of worms in the lungs of pigs killed in the public slaughter-houses, and it is frequent in Switzerland and France. The male of this species is from eight to nine lines in length, and the female about an inch and a half. The females are by far the most numerous of the two. It is clear that there are two distinct stages of the affection, the one mistaken for true turbercular disease, and the other when the worms are fully developed and lodged in the air-passages."

"To cure the disease, inhalations of chlorine gas are recommended, or the internal administration of camphor and turpentine, in oil (according to size of animal—camphor, fifteen grains to one drachm; oil of turpentine, one to three drachms; and olive oil, one-half to an ounce and a half; mix, and give once daily.) Sound food must be allowed, with ferruginous tonics. The iron may be given to the extent of ten to twenty grains daily to each pig, with a drachm of common salt mixed together with the food."

MAKING BUTTER IN WINTER.

Having been a reader of your valuable paper for many years, and a practical farmer's wife for more than twenty-five, I presume to offer a few simple rules for making good butter in winter, as in your last issue, "S." wants to know "what ails the cream?"

In the first place, I would have the cows well fed, well bedded, and milked as clean as possible. Then it seems to me, if our farmers would take a little more pains to make labor convenient, about half the work would be saved.

I have a closet in my kitchen, four feet six inches high, five feet three inches long, one foot six inches deep, with one board shelf in the centre, for strength, and seven tiers of slats, set edgewise, three-fourths by one and a half inches, and six inches apart. This closet will hold over forty pans of milk, as four large pans or five small ones will stand on a shelf.

When my milk comes from the barn, I strain it into as many pans as it seems best, and set each pan over a kettle of scalding water till a skim rises. This process I think much better than scalding the cream. When I skim off the cream I set it where it will not chill, and stir it faithfully each time I add any to it. Before churning, I set my pail or pot behind the stove, from twelve to twenty-four hours, and have the churn well scalded before putting the cream in. I do not have to churn over fifteen minutes. If these rules are carried out, a good article will be produced even in winter. CARRIE.

Worcester County, Mass., Jan. 7, 1871.

REMARKS.—Mrs. Carrie will receive the thanks of many troubled butter-makers for the foregoing, and if her description of that neat little milk closet shall secure for others a like convenience, they will have additional cause for gratitude, when showing lumps of good winter butter, as the results of the observance of Carrie's rules.

SIGNS OF PREGNANCY IN COWS.

I have two valuable cows, both raised by myself, one being of native breed wholly, the other half Jersey. They both went to the bull near the same time, and till within a few days past, have given promise, so far as I know, of coming in about together; and this would have been near the first of March. But now I find at this late day, that one of them appears like a cow not with calf. Is it within your own, or the experience of any of your correspondents, that a cow should for six months after going to the bull appear as if all was right, and yet at this late day, should lead you to suppose her farrow? As I do not recollect any discussion of this topic in any number of your excellent paper, I would thank you to lay it before your readers and correspondents, and give us the results of your own or their experience. D. C.

Essex County, Mass., Jan., 1871.

REMARKS.—Your cow is with calf; or, she has aborted; or, she is farrow.

Is she with calf? Prof. Law mentions the following, as being trustworthy signs of pregnancy in cattle. 1. Absence of desire for the bull at the regular period. 2. The filling and pendant position of the abdomen. 3. The movements of the calf, seen in the right flank, especially after a drink of

cold water. 4. When the closed fist is punched into the right flank suddenly, and held for a few seconds, the calf is at first repelled, and as it floats back in the surrounding liquid, it is felt to strike against the knuckles. 5. Application of the ear over the right flank, will often detect the beating of the calf's heart. 6. A careful examination with the hand in the rectum, made by some one acquainted with the parts, will give positive indications.

Has the cow suffered abortion? This question can best be answered by yourself, or by those who have had the care of her. Is the cow farrow? She certainly is, if all or nearly all of the signs of pregnancy are absent, and she has not aborted. Have any of our readers known a similar case?

SELLING MILK.

I feel a deep interest in farming, and believe that there is no need of the farm products being controlled by speculators. If the farmer will awake to his true situation he will find the matter rests wholly with him. In my vicinity the chief product of the farm is milk. We depend more on that article than all the rest; but it is the only article we sell, of the price of which we have nothing to say. And why is it? Because we neglect to use the power that lays in our own hands. If we do not walk with the staff we hold, no one is to blame but ourselves. The speculator has grown rich out of us. And Napoleon like, has learned to be obeyed, while we, "meek as Moses," have learned to obey him. Let us open our eyes and see what is before us. Let us join together, all of us, and show a bold and honest front, and give the speculator to understand that we *will* have our rights; that the time has come for the farmer to make the price for his milk. I say to you, brother farmer, we can and must break up this ring of monopolists. I know no better way than to follow the example the speculator has set for us, that is, to put ourselves under bonds not to sell one drop of milk to him, after the first day of next April, unless we get a fair price, and fair treatment about the return of milk after it has been trucked to market. If we take this course you can plainly see he cannot do business one day without our milk. In my opinion this is the only sure and safe move to make. Idle talks will not do; we need prompt action. We must talk the subject over in our club meetings, and call a convention of milk producers; draw up our bonds, and every man come promptly up and sign them. I can see no reason why such a course as this should not be adopted. One thing is certain, if we allow the speculator to handle us for ten years to come, as he has for ten years past, our farms will not sell for half they cost us. C. W.

Weston, Mass., Jan., 1871.

REMARKS.—If the carriers of newspapers had obtained such control of their circulation that they could come into the offices of the publishers and gravely inform them what would be the price of their respective publications for the next six months, we should suppose that the proper course for those publishers to pursue would be to adopt some other plan for the circulation of their papers, and to discharge their old agents at once and entirely. Consequently we cannot endorse our correspondent's recommendation. Farmers raise the milk, and they should control the product till it reaches the consumer. And until they make up their minds to do this, all "bonds" and Fourth-of-July speeches, will not do good enough to pay for the paper they are spread on. Some such course as that suggested by Judge French at the late meeting of the Milk Producers' Association, must be adopted. Both fire and agents are "good servants, but hard masters."

FARMERS' CLUBS IN ENGLAND.

At a recent meeting of the Much-Wenlock (England,) Wapentake Farmers' Club, the third in order of its kind in the Kingdom, established twenty-seven years ago, the New American Revolving Mould Board Plough attracted much attention and elicited remarks of high commendation, not only from the judges, but from a large number of practical agriculturists, for its novelty, simplicity and perfection of the ploughing.

The following prizes were embodied in the report:—"Essays," a prize of £10, the gift of the Right Honorable Lord Wenlock, for the best essay on the advantages of steam cultivation, and the best means of introducing it into the Club District.

Some of the other prizes ranged as follows:—for the best cultivated farm; for the best cultivated root crop; for the best cultivated root crops, on farms not exceeding 100 acres; for the best managed farms; for the neatest cottage and garden.

Shepherd prize—first class, 232 lambs from 150 ewes; second class, 82 lambs from 50 ewes. Ploughing, eleven competitors. Hedging, nine competitors.

Agricultural clubs have of late years been the means of stirring up and rooting out the old come-day, go-day, pray-send-Sunday system of farming, in the Old World, and have done a vast amount of good. They have given new life and energy to the young and rising generation.

Those British Agricultural Clubs and Societies don't give prizes for the best "trotting horse." By the owner of such no praise is actually merited. No, they subscribe their money to farmers and their servants—the real tillers of the soil—for their zeal, industry and good management in agriculture. That man who can produce the finest wagon horse for agricultural purposes gains a prize; but they don't want, and don't have "trotting" horses on the plough or on the thrashing machine. They are purely agricultural, and not jockeying clubs.

TO MAKE A SOW OWN PIGS NOT HER OWN.

Having a Chester white sow that brought more pigs than she could raise, but not liking to knock them on the head, I took some away and put them in a four-bushel wheat sack together with four other pigs, of the same age, belonging to another sow; tied up the bag, and put them away in the bush to tumble and roll together, out of hearing of the sow which owned the four pigs. She was very uneasy at losing her family. In the course of an hour, I emptied the whole lot out before her. She looked at them very closely, turned them over with her nose, smelled first one and then another, but was quite unable to distinguish her own from the new addition. So down she lay for them all to suck, and took to them right away, with motherly care.

JOHN WHATMORE.

Bridgenorth Farm, Dunleith, Ill., 1871.

SALTPETRE IN BUTTER.

Your correspondent, S. O. J., exercising her womanly prerogative is bound to have the last word about saltpetre and washing butter. To this I will most graciously assent after one word more.

Of more than twenty chemists and professors in agricultural and medical institutions, and a host of medical practitioners, with whom we have con-

versed on the subject, we have met *not one* who does not pronounce the use of saltpetre in butter making injurious in its tendencies.

The "*infinitesimal* doses" S. O. J. speaks of in her rejoinder of Jan. 7, cannot be the doses I alluded to; for in her former paper, that to which I took exceptions, it was recommended to put two heaping tablespoonfuls (not less than three ounces) into each three gallon jug of cream. That implies a little backing down on her part; but that is uncalled for, since we always back right down when a woman assails; and we beg pardon for having innocently and ignorantly raised our humble voice against drugging an article of such general consumption as butter. We have known a case where the whole product of a large dairy was sold much below the ruling price of butter of the same general quality, simply because it had been drugged with saltpetre; but that may only prove that the commission merchants and the purchasers were either fools or knaves, or perhaps both.

WASHING BUTTER.

We have never assumed that as good butter may not be made by *working* out the butter milk without water, but we do say that the washing process is much easier, and there is less liability to injure the butter than by working it without the water, and that the quality is in no sense impaired by the process.

In regard to the desire of S. O. J., to put some of her "unwashed Alderney butter, made in September, beside his (my) washed butter, in the spring, and see if he (we) could not discern the difference in the sweetness," we have to propose that she send her specimens to Hon. S. L. Goodale, Secretary of the Maine State Board of Agriculture, at Saco, Me., for comparison with the butter which he is now using upon his own table, and which was washed before being gathered in the churn.

Much especial merit is claimed for Alderney butter, but we consent to waive all that and submit the article named, which is but the ordinary product of a "native" dairy owned by one of my neighbors, churned in a box-churn, and washed when the particles were not larger than peas and worked immediately, and but once, and packed twenty-four hours after. It was made in the fall for immediate consumption, is not drugged, and is salted to suit the taste, and not for the purpose of keeping it; but we are willing to bide the issue nevertheless. O. S. BLISS.

Georgia, Vt., Jan., 1871.

THREE HUNDRED POUNDS OF BUTTER FROM TWO TEATS.

I have a cow that calved the 20th of last March, from which I have made over 300 pounds of butter. She gives milk from only two teats. She comes in the middle of next April. Have used what milk we needed for a family. She is a mixed breed. Pretty well for two teats! J. RYAN.

Putney, Vt., Jan. 6, 1871.

AGRICULTURAL ITEMS.

—The President and Faculty of the Iowa Agricultural College intend to hold Farmers' Institutes during the winter, at different points of the State.

—A new work entitled the *Egyptian Agriculturist*, was started at Cairo, in Egypt, on the 1st of June. This looks like returning toward its ancient glory, when there was "corn in Egypt," though other lands failed.

—Mildew, the *Boston Journal of Chemistry* says, is a fungoid plant, which has life or vitality like other parasitic growths. Examine it under a microscope of 300 diameters, and its wonderful and beautiful structure will become apparent.

—Mr. Quinn's pear orchard of Duchesse d'Angouleme trees has yielded this year a net return of $6000. The ground occupied in producing trees is less than ten acres, but it has taken over ten years to grow them, and they were undoubtedly sold at gilt-edged prices.

—The *Vermont Farmer* speaks of one farm, a short distance below Montpelier, of 150 acres, that is valued at $12,000; another adjoining this, was sold last year by the Bailey Bros., for $18,000; one of 175 acres, a short distance above the village, was bought three years ago for $9000.

—The Ontario *Farmer* says that Canada millers are importing wheat from Chicago and Milwaukee largely. One miller in Goderich had bought 70,000 bushels, costing $1.05 to $1.10 at his mill, in gold. Other millers in the Province are also buying States wheat extensively.

—Mr. A. S. Hay, of Morgan county, Ill., raised two crops of potatoes on the same land the past season. The first crop was planted March 25; commenced using them June 1; finished digging August 11, on which day he planted the second crop, which was harvested November 5, with a larger yield than the first crop.

—The flashy owner of a crow-bait span was complaining to some bystanders that he did not know what was the matter with his horses; he had tried everything he could hear of, Condition Powder and all other specifics, but to no purpose; they *would not* improve in flesh. A stable boy, whose sympathies were aroused by the story, comprehended the situation, and modestly asked, "Did yees iver try corn?"

—Henry Ward Beecher says that every country place should have that very coquette among trees, the Aspen. It seems never to sleep. Its twinkling fingers are playing in the air at some arch fantasy almost without pause. If you set at a window with a book, it will wink and blink, and beckon and coax, until you cannot help speaking to it. That must be a still day that does not see the Aspen quiver. A single leaf will sometimes begin to wag, and not another on the whole tree will move! Sometimes a hidden breath will catch at a lower branch, then shifting will leave them still, while it shakes a topmost twig. It is the daintiest fairy of all the trees. One should have an Aspen on every side of his house, that no window should be without a chance to look upon its nods and becks, and to rejoice in its innocent witchcraft.

DIFFERENCE IN CLIMATE.—The *Rural Carolinian*, in its "Farm and Garden Calendar for *January*," says:—"Irish Potatoes may be put in any time during the month, but in this latitude they are liable to come up too soon, and get cut off by frost, if planted the first part of the month."

APPLICATION OF MANURE.

The *Mirror and Farmer* gives a report of the discussson by the Tuftonborough, N. H., Farmers' Club, on the subject of applying manure.

R. B. Neal said he favored ploughing in the manure; as, in a dry season like the past, if on the surface it will lay and become as dry as chips, and render very little benefit to the growing crop; and yet he thought farmers should use their judgment as to the nature of the soil.

Peter Stackpole gave it as his opinion that top-dressing did much the best on his soil, and thought top-dressing would largely increase the crop of hay on most farms. He was like the boy who wished to have his bread buttered on both sides; that is, he thought much land would bear a coating of manure ploughed in—and top-dressing also.

William H. Davis said that on light, sandy soil the manure ploughed in four or five inches worked first-rate, but on heavy, wet land it does much better spread on the surface; he thought the land retained the benefit of the dressing longer when buried beneath the surface, and that much of the richness of manure when left on the top of the soil escaped in gases and was lost to vegetation.

W. W. Blaisdell thought the season had much to do with the application of manure, but favored ploughing in. One great mistake he thought was in allowing the liquid excretions to run to waste. This is permitted by many because they are not aware that the liquid was not only of equal but even greater value than the solid portion. Every one is familiar with the great efficacy of the excrements of poultry or other bird manure compared with ordinary farm-yard manure; and this superiority is owing to the fact that in that of the bird is all the liquid as well as the solid, and hence the abundance of ammonia yielded by manure from the hen-roosts or by guano.

HOW TO FIT A COLLAR TO A HORSE.—In purchasing a collar for your horse, it is important to get one that fits him, as both the animal and yourself will thus be saved much annoyance. The *Harness and Carriage Journal* says:—

"The plan adopted in the West, which we are assured by men who have been long in the collar business, does not injure the collar in the least, is to dip it in water until the leather is thoroughly wet, then put it on the horse, secure the hames firmly, keeping it there until it becomes dry. It is all the better if heavy loads are to be drawn, as that causes the collar to be more evenly fitted to the neck and shoulder. If possible, the collar should be kept on from four to five hours, when it will be perfectly dry and retain the same shape ever afterwards; and as it is exactly fitted to the form of the neck, will not produce chafes nor sores on the horse's neck."

Ladies' Department.

WHEN I WAS YOUNG:

OR,

WHAT THE OLD WOMAN SAID TO HER DAUGHTER.

One summer eve I chanced to pass, where, by her cottage gate,
An aged woman in the sun sat talking to her mate;
The frost of age was on her brow—its dimness in her eye,—
And her bent figure to and fro rocked all unconsciously:
The frost of age was on her brow, yet garrulous her tongue,
As she compared the doings now with those when she was young.
"When I was young, young girls were meek, and looked round kind of shy,—
And when they were compelled to speak they did so modestly;
They staid at home, and did the work, made Indian bread and wheaten,—
And only went to singing school—and sometimes to night meetin';
The children were obedient, then—they had no saucy airs,—
But minded what their mothers said—and learned to say their prayers.
But now-a-days they know enough before they know their letters,
And children that can hardly walk will contradict their betters:
Young women, now, go flirting round, and looking out for beaus,
And scarcely one in ten is found who makes or mends her clothes;
But there, I tell my daughter,
Folks don't do as they'd oughter;
They do not do as they'd oughter do—
Why don't they do as they'd oughter?

"When I was young, if a man had failed, he shut up house and hall,
And never ventured out till night, if he ventured out at all,
His wife sold all her chiny plates,—his sons came home from college,—
His girls left school and learned to wash, and bake, and such like knowledge;
They gave up cakes and pumpkin pies—and had the plainest eating,
And never asked folks home to tea—and scarcely went to meeting:
But, now-a-days, when a merchant fails, they say he makes a penny;
His wife don't have a gown the less,—his daughters just as many;
His sons they smoke their choice cigars,—and drink their costly wine,—
And she goes to the opera,—and he has folks to dine;
He walks the street,—he drives his gig,—men show him all civilities,—
And what in my days were called debts, are now called *liabilities;*
They call a man unfortunate who ruins half a city,—
In my days 'twas the creditors to whom we gave the pity;
But there I tell my daughter,
Folks don't do as they'd oughter;
They do not do as they'd oughter do,—
Why don't they do as they'd oughter?

"When I was young, crime then was crime,—it had no other name;
And when 'twas proved against a man, he had to bear the blame;
They called the man who stole, a thief,—they wasted no fine feeling,—
What folks call *petty larceny*, now, in my days was called stealing;
They did not make a reprobate the theme of song and story,
As if the bloodier were his hand, the brighter was his glory;
But, there, I tell my daughter,
Folks don't do as they'd oughter;
They do not do as they'd oughter do,—
Why don't they do as they'd oughter?"

WHO WORE THE FIRST RING?

"Conclusive evidence is not obtainable," remarks a recent writer, "when rings were first used." But one fact is plain—they are of great antiquity, were always worn as tokens of trust, insignia of command, pledges of faith and alliance, and as marks of servitude. The religious system of Zoroaster is exceedingly ancient, and in some of the old sculptures of that sect, images hold a ring, indicative of omnipotence and power. And to this day, the Persians, Hindoos and all the Eastern nations attach great significance to the ring. The Egyptians were particularly fond of this ornament. There are specimens in the Museum of the Louvre. Some date as far back as the reign of Moeris. At the British Museum there is an exceedingly fine specimen. This is a ring of the finest gold, of the Ptolemaic or Roman period, with figures of Serapis, Isis and Horus. The same collection has also others of a similar metal, set with the scarabæus or sacred beetle. Others have the names of Thothmes III. and Rameses III. The most ancient ring in existance is that formerly worn by Cheops, the builder of the great pyramid, found in a tomb in the vicinity of that monument, of the finest gold, with hieroglyphics. Sundry passages of Holy Writ prove the antiquity of the rings. When Pharoah confided the charge of all Egypt to Joseph, he took the ring from his finger and committed it to him as a symbol of command. Ahasuerus did in like manner to his favorite, Haman, and subsequently to Mordecai. The impression of the Monarch's ring had the force of a command. "Write ye also for the Jews, as it liketh you, in the king's name and seal it with the king's ring; for the writing which is written in the king's name and sealed with the king's ring, may no man reverse." Rings among the God-favored people, when used as seals, were called "tabaoth," the name of a root, signifying to imprint and also to seal. They were commonly worn on the little finger of the right hand.—*The Young Ladies' Journal.*

DRESSING FOR THE HAIR.

It is a common practice now,—perhaps it always has been,—to use something as a dressing for the hair. If the hair falls off, some Phœnix-like substance is expected to make it spring up again into all the beauty and redundancy of youth. If it turns gray, some potent alchymy is to restore color, freshness and lustre. A good head of hair is certainly desirable, and to feel young and look young, *appropriately*, makes the world more agreeable, and promotes long life. So let us all wear the graces of simplicity, pleasing manners, and sympathy with all our fellow-men, and if need be to give more grace to the person, to dress the hair. In doing so, however, read the timely and valuable suggestions below, which we copy from Dr. Nichols's *Boston Journal of Chemistry*, which calls attention to the different preparations sold by druggists for dressing the hair. It says:—

All the oils and greasy pomades with euphonious names are manufactured from lard oil and simple lard. Bears' grease is the most filthy of all animal fats, and it is safe to say that the genuine stuff is but rarely or never sold by the druggists. Castor oil and cologne spirits makes a good and cheap dressing. The oil derived from the castor bean possesses peculiar properties which admirably adapt it for use on the hair. A cheap and very good dressing is made by dissolving four ounces of perfectly pure, dense glycerine in twelve ounces of rose water. Glycerine evaporates only at high temperatures, and, therefore, under its influence the hair is retained in a moist condition for a long time. As a class, the vegetable oils are better for the hair than animal oils. They do not become rancid and offensive so rapidly; and they are subject to different and less objectionable chemical changes. Olive oil, and that derived from cocoa-nut, have been largely employed, but they are far inferior, in every respect, to that from the castor bean. Do not use any oils whatever, is the best advice. Those men and women having the finest and glossiest suits of hair, simply use soft water, washing the head every few days with pure castile soap. But as we do not expect everybody to subscribe to this formula, it is well to caution the general public against the indiscriminate use of preparations sold for the hair."

DOMESTIC RECEIPTS.

Sausages.—The proper seasoning is salt, pepper, sage, summer-savory, or thyme; they should be one-third fat, the remainder lean, finely chopped, and the seasoning well mixed, and proportioned so that one herb may not predominate over the others. If skins are used, they cannot be prepared with too much care; but they are about as well made into cakes; spread the cakes on a clean, white wood board, and keep them in a dry, cool place; fry them long and gently.

Lard.—Leaf lard is the nicest for all cooking purposes; skin all the fat that is to be tried into lard, and commence by frying gently a little leaf lard, or your fat will scorch; let it cook slowly, and dip off the fat as fast as it is liquefied, and strain it through a cloth; when all is strained that can be dipped off, squeeze the remainder by itself in the cloth. If the lard is to be used for cooking, salt it a trifle when first put on; much of the salt will be found at the bottom of the kettle undissolved,

still, it would seem to be better that salt should be used. If the lard is to be used for burning in lard lamps, salt would be injurious. If the fat is not skinned before trying, the gluten in the skin will make the lard impure and frothy. Save the scraps and skins for soap grease.

POTATO PASTE.—A dough or paste can be made from a mixture of potatoes and flour that is easy of digestion. Take three or four good-sized potatoes, boil them well, mash as smoothly as possible, then add a quart of flour and as much lard as may be desired. Work all well together and roll in the usual way of flour paste.

DOUGHNUTS FOR NEW-YEAR AND AFTER.—Boil one quart of new milk and melt in it half a pound of butter. Beat three eggs with two pounds of sugar, then pour on the boiling milk, stirring all the time. When nearly cold stir in a teacup of yeast, a teaspoonful of salt, and flour enough to make a stiff batter; when quite light knead in flour enough to make a soft dough. Add a grated nutmeg and a little mace. Let it rise again until very light, cut in strips, or according to fancy, and fry in hot lard.—*Ger. Telegraph.*

A DELICIOUS SWISS-CAKE.—Beat the yolks of five eggs and one pound of sifted loaf-sugar well together; then sift in one pound of best flour, and a large spoonful of anise-seed; beat this together for twenty minutes; then whip to a stiff froth the five whites, and add them; beat all well; then roll out the paste an inch thick, and cut them with a moulded cutter rather small; set them aside till the next morning to bake. Rub the tins on which they are baked with yellow wax; it is necessary to warm the tins to receive the wax; then let them become cool, wipe them, and lay on the cakes. Bake a light brown.

SEED-CAKE.—Take half a pound of butter and three-fourths of a pound of sugar, creamed; three eggs, beaten lightly, and two tablespoonfuls of picked and bruised caraway seeds; dissolve half a teaspoonful of soda in a cup of new milk; mix these well together until they are about the consistency of cream; then sift in two pounds of flour, mix well with a knife, and roll them out into thin cakes, about an inch in thickness. Bake in a quick oven.

BUCKWHEAT CAKES.—Have ready two cups; put one teaspoonful of tartaric acid in one cup, one teaspoonful of soda in the other cup; add to each about two tablespoonsful of cold water; stir it well. Make one quart of buckwheat meal into a thick batter, with moderately warm water; add the contents of one of the cups; stir it well; then pour in the contents of the other cup; stir that well also; add to the whole one tablespoonful of melted butter, and bake on a griddle nicely cleaned and greased with good lard. The batter is ready for use as soon as mixed.

AN EXCELLENT MARMALADE is made by boiling sweet apples alone, in cider made of sweet apples, and boiled down so as to be very rich. The sauce is in this case strained warm through a very coarse sieve or riddle, and boiled again a little while; or it may be put into deep dishes and set into the oven after the bread is drawn.

BOILED PEARS are eaten with roast meat instead of apple or cranberry sauce. Choose fair, smooth ones: put them into cold water and boil them whole, without paring and without sugar. It will take an hour and a half, according to the size of the fruit.

TO PICKLE RED CABBAGE.—Get a head of the darkest red cabbage, and slice it very thin; shake on it a little coarse salt and let it rest twenty-four hours to drain. Boil an ounce of black pepper and an ounce of allspice in a quart of vinegar, and when cold pour it over the cabbage, then pack it close and keep it well covered.

AGASSIZ says that in a certain Amazonian tribe, on the day of the marriage, while the wedding festivities are going on, the bridegroom's hands are tied up in a paper bag filled with fire-ants. If he bears his torture smilingly and unmoved, he is considered fit for the trials of matrimony.